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ABSTRACT

With manpower considerations assuming an ever increasing importance for the Department of Defense, the report was prepared as part of a research program intended to bring new methodologies to bear on present and future military manpower problems. The report describes the All-Volunteer Force (AVF) recruiting, classification, and assignment (RCA) processes and examines the emerging issues surrounding those processes. Section 1 describes the operational characteristics of pre-Volunteer RCA; Section 2, All-Volunteer RCA in terms of the major underlying influences shaping its development; and Section 3, the emerging issues and potential problems acting on RCA and their relationship to one or more of the underlying influences. Pre-Volunteer RCA was relatively simple; the most important influence was the virtual guarantee of a ready supply of high quality people to fill the needs of the Services. The absence of this guaranteed supply has been the dominant factor in shaping AVF adjustments and adaptations; seven major institutional influences acting on RCA are identified, and each relates to one or more emerging issue/problem affecting RCA. Six emerging issues are identified, which have in common a high degree of complexity and pervasiveness and which, together, constitute a major challenge to AVF management. (Author/AJ)

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Recruiting, Classification and Assignment in the All-Volunteer Force: Underlying Influences and Emerging Issues

Fred Morgan and Darien Roseen

A Report prepared for

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

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PREFACE

This report was prepared as part of Rand's OSD Manpower, Personnel, and Training Program, sponsored by the Human Resources Research Office of the Defense Advanced Research Projects Agency (ARPA). With manpower considerations assuming an ever-increasing importance for the Department of Defense, the purpose of this research program is to bring new methodologies to bear on present and future military manpower problems.

The original objective of this research effort was simply to provide a brief, descriptive analysis of the present recruiting, classification, and assignment (RCA) processes of the Services. In the course of our initial inquiries, however, we encountered evidence that the RCA environment was being subjected to some rather strong influences brought about principally by the transition to volunteerism. Alerted by our observations that the Services were to some extent unaware of the magnitude and complex nature of the changed RCA environment, we began to examine the problems that would likely arise as a result of these influences if the Services failed to recognize and react to them in time. Our original limited expository objective was therefore expanded to include the objective of describing the major underlying influences acting upon RCA and relating these influences to the potential problems that appear likely to arise.

We surmised that a principal reason for any absence of comprehensive attention to these issues/problems lay in their broad, interservice nature and the inability of any one Service to adapt to or control the underlying influences without affecting the other Services. In short, each Service would be affected in different ways by different influences, and any effective attack on the issues/problems would necessarily require OSD impetus and overall guidance.

This report addresses events occurring in the RCA system up through June 1973. The authors recognize that considerable change has happened in the system since that time, but they feel that the underlying principles and issues are still valid. The report is intended to provide perspective for OSD management action. To the extent that it encourages deeper investigation of the emerging issues or elicits constructive controversy it will have met its purpose.

SUMMARY

This report describes the All-Volunteer Force (AVF) recruiting, classification, and assignment (RCA) processes and examines the emerging issues surrounding those processes. Section I describes the operational characteristics of pre-Volunteer RCA; Sec. II, All-Volunteer RCA in terms of the major underlying influences shaping its development; and Sec. III, the emerging issues and potential problems acting on RCA and their relationship to one or more of the underlying influences of Sec. II.

Pre-Volunteer RCA was relatively simple. Most decisionmaking authority was concentrated in the classification and assignment areas; few concessions were made to the interests, likes, or dislikes of prospective recruits. The several steps of RCA systems were essentially screening operations which first identified jobs a recruit was eligible to hold, and then selected one for him based on Service-established priorities and the recruit's aptitudes. This simple characterization captures the sense of RCA processes in a draft-dependent environment. The most important influence was the virtual guarantee of a ready supply of high-quality people to fill the needs of the Services.

As could be expected, the absence of a draft-guaranteed supply of quality people has been the dominant factor in shaping AVF adjustments and adaptations. Elimination of the draft has stimulated the emergence of several major institutional influences acting on RCA. We have identified seven underlying influences which need to be understood to appreciate the nature and origin of the major issues developing around the RCA "systems":

1. Although the supply of military manpower appears adequate at this time, *future supply will be more speculative than in pre-AVF years.*

2. *Competition has become much more important* as a means of distributing recruits among the Services and, within each, among jobs, units or bases.

3. *The principal qualitative procurement objective of the Services is to maintain or improve upon pre-AVF standards.*

4. *Traditional and largely self-imposed limitations on the supply of potential recruits are being maintained* as, for example, with the continued limited participation of women in the Armed Services.

5. *Virtually all operational adaptations to volunteerism have been concentrated in the recruiting arena*, and none in the areas of training and job staffing patterns.

6. *There has been a definite trend toward the diffusion of traditional RCA responsibilities* over a greater number of system participants, the most important of which is the prospective recruit himself.

7. *The present RCA "systems" are much more complex from the standpoint of operational evaluation and control than their predecessors.*

None of these seven influences derived from an explicit policy statement; each derives from a multitude of long-standing policies, traditional practices, and standard operating procedures. None of these influences is in itself a problem, but each relates to one or more emerging issues/problems affecting RCA.

These emerging issues have in common a high degree of complexity and pervasiveness, and together they constitute a major challenge to AVF management. While not unfamiliar to those who have devoted their energies to the AVF, the following six issues have arisen or been exacerbated by the AVF and represent potentially serious pitfalls if left unattended:

A. *The supply of volunteers may be subject to large variations over time.* Historically, certain variations have been seasonal and, therefore, relatively predictable; others have been almost totally unpredictable. The impact of either type of variation on the AVF remains to be determined.

B. *The supply of volunteers will tend to distribute itself inefficiently among the Services.*

C. *The supply of volunteers will tend to distribute itself inefficiently within each Service.*

D. *The Reserve Forces are faced with the prospect of continuing deterioration of their supply of volunteers* in the absence of specific mechanisms for Total Force analysis.

E. *Efficient planning, organizing, and controlling of the RCA "systems" are impeded by the absence of mechanisms for the evaluation of RCA effectiveness.*

F. *Insufficient attention is being devoted to reexamination of reenlistment behavior and retention programs* in light of probable differences in volunteer outlook.

These six major issues are each related to one or more of the underlying influences summarized earlier. Since all issues are, therefore, indirectly related through their supporting influences, satisfactory resolution of any one issue may be expected to affect others. If resolution involves the manipulation of supporting influences, it is necessary that OSD provide guidance and exert control to balance the actions of the Services, since all the influences cut across Service lines.

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I. THE PRE-VOLUNTEER RECRUITING, CLASSIFICATION, AND ASSIGNMENT PROCESS

INTRODUCTION

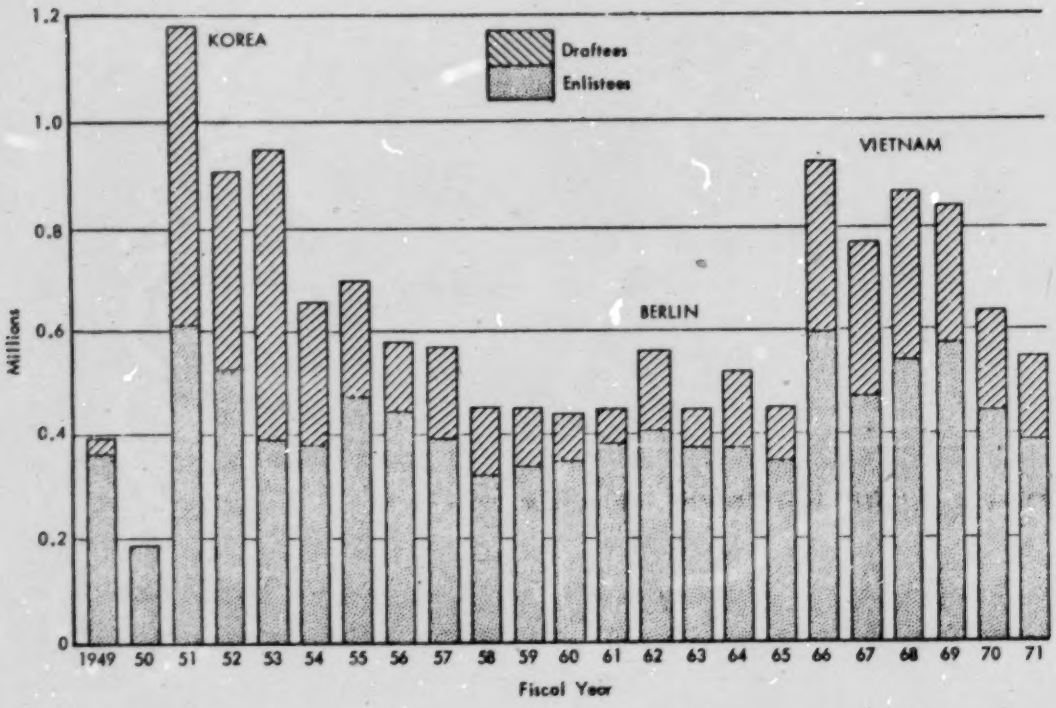
The principal features of the All-Volunteer Force (AVF) recruiting, classification, and assignment (RCA) process can be better understood if we first establish a historical perspective within which the significance of certain changes can be seen. This is most easily done by comparing the present process with the one that prevailed when the draft was in full effect. This section provides the first step in the comparison, a description of pre-Volunteer RCA.

The pre-Volunteer process was relatively simple: most decision-making authority was concentrated in the classification and assignment areas, with few concessions granted to the preferences of prospective recruits. The several steps of RCA were essentially screening operations to identify which jobs a recruit was eligible to hold, and then to select one for him based on Service-established priorities and the recruit's aptitudes.

OVERVIEW

The most important influence on the structure and operation of the pre-Volunteer RCA process was the draft. As indicated in Fig. 1, since 1951 draftees have played a major role in filling DoD requirements for non-prior service (NPS) personnel. In addition to this supply of draftees, many enlistees volunteered for service in order to escape the uncertainties of the draft. These so-called draft-induced volunteers represented approximately one-half of all DoD enlistments. The uncertainties of the draft prior to the lottery system served also to augment the flow of true volunteers with approximately an equal number of draft-induced enlistees.

Thus the draft not only provided conscripts when necessary, but also increased the size of the volunteer pool and thereby reduced the need for conscription. And the availability of a relatively assured supply of inductees tended to make the Army a less serious competitor



SOURCE: U.S., Congress, Senate, *Report of the Senate Armed Services Committee Hearings on Selective Service and Military Compensation*, 92d Cong., February 1971, pp. 58-59.

Fig. 1--DoD accessions, 1949-1971

for the available supply of volunteers, thereby easing competition between the other Services for these individuals.[1]

Another important dimension of this draft-guaranteed supply was the overall quality of personnel it provided the Services. Although many serious and unresolved issues remain associated with the development of a satisfactory measure of individual quality, the Services have generally relied on educational background, scores on the Armed Forces Qualification Test (AFQT), and scores on a variety of more specialized aptitude tests as indicators of quality and, in particular, of

[1]S. W. Kemp, *Productivity of U.S. Military Recruiting Systems*, Study IV, Studies for the President's Commission on an All-Volunteer Armed Force, November 1970.

trainability. Of these, educational background has been the most effective predictor of individual performance.[2] As shown in Fig. 2, the Services have seen a consistent increase in the average quality of the enlisted force as measured by educational standards. The Services were able to view the entire problem of procuring NPS personnel as a simple matter of quality screening.

This supply was available regardless of some of the inherent unattractive features of military service. For example, from 1952 to 1963 enlisted men with fewer than two years of service received no pay increases whatever, a situation rationalized again in 1965 by the House Armed Services Committee on the ground that:

> ... since entrance into service continues to be stimulated by the existence of draft laws, the bill does not recommend that entrants into military service at these levels be given compensation which is actually competitive with that provided either in private industry or in Federal civil service.[3]

There was no apparent need to offer inducements to attract more or better qualified young men to military service; first-term accessions were treated with what was characterized as "deliberate neglect."[4] The Services offered very few concessions to the interests, likes, or dislikes of prospective recruits, choosing to retain most decision prerogatives in the interest of lower costs, increased efficiency, or

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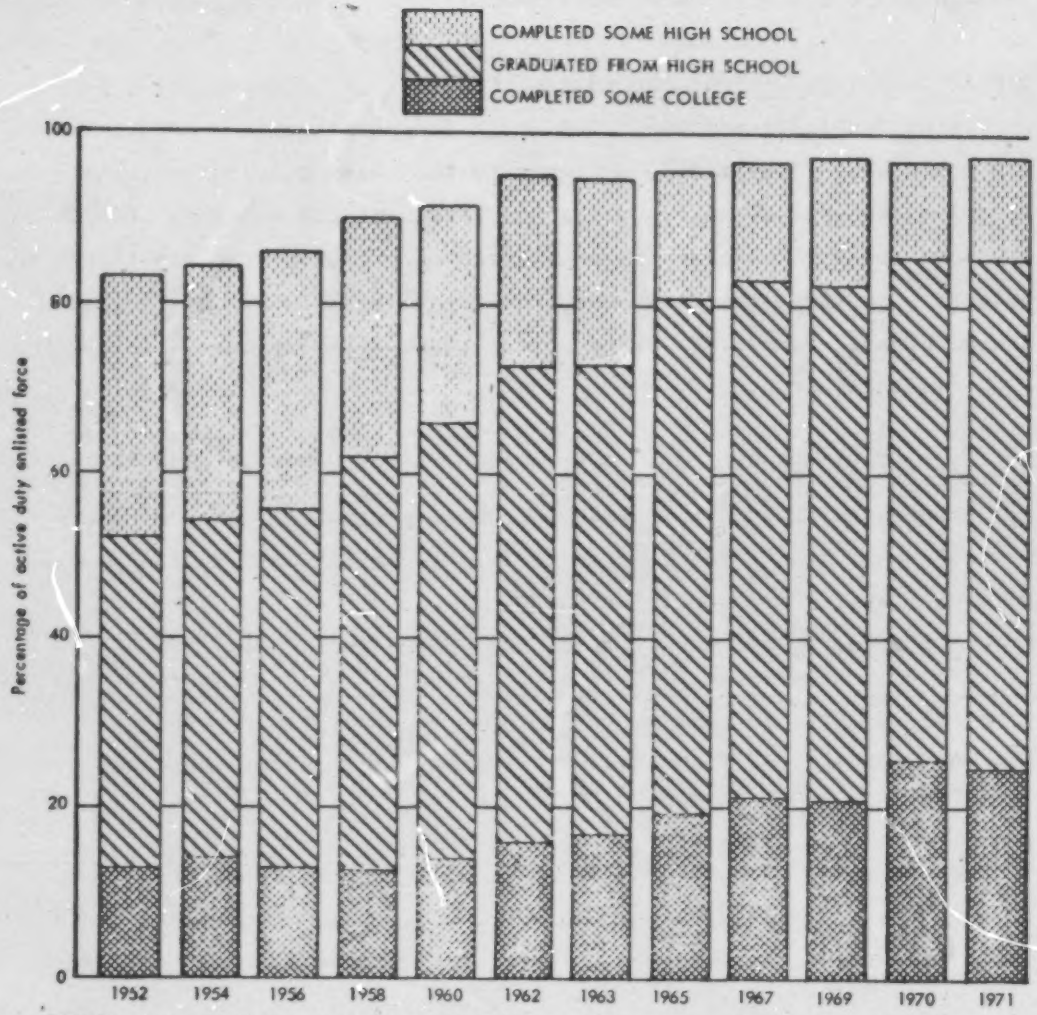
[2]See, for example, J. A. Sullivan, *Qualitative Requirements of the Armed Forces*, Vol. I, Studies Prepared for the President's Commission on an All-Volunteer Armed Force, November 1970; J. W. Taylor, L. V. Schifers, and W. J. Janecek, *Palace Quality*, Personnel Research and Analysis Division, Directorate of Personnel Plans, HQ USAF, AF/DPXY-PR 72-006, Washington, D.C., May 1972; E. Flyer, *Prediction by Career Field of First Term Airmen Performance from Selection and Basic Training Variables*, Air Force Systems Command, PRL-TDR-64-5, Lackland AFB, March 1964; J. A. Pleg and J. M. Goffman, "The Armed Forces Qualification Test: Its Validity in Predicting Military Effectiveness for Naval Enlistees," *Personnel Psychology*, Vol. 20, No. 3, 1967, pp. 323-340.

[3]See Statement of Congressman William A. Steiger, *Hearings on Selective Service and Military Compensation*, Senate Armed Services Committee, February 1971, p. 718.

[4]Ibid.



SOURCE: Department of Defense, OASD (Comptroller), Directorate for Information Operations, April 5, 1972.

Fig. 2 -- Educational attainment of active duty enlisted force

simple convenience. This relatively low priority attached to making military service more attractive to prospective recruits was probably a rational policy given that environment.

OPERATIONAL IMPLICATIONS AND CHARACTERISTICS

Specific implications of the draft-dependent environment of the 1960s are best illustrated by examining the roles that various functional groups played in procuring new personnel for military service. Since we are not concerned here with the machinery of the draft and Selective Service, the first such functional group is the recruiting establishment, usually a prospective recruit's first formal contact with military personnel.

Recruiting

The recruiting establishment of the 1960s was a small, comparatively stable body accustomed to performing traditional duties in traditional ways. The unchanging nature of recruiting duties was described by the Central All-Volunteer Force Task Force in this way:

> Traditional recruiting methods, with some exceptions, have not significantly changed over the past 100 years. Appeals popular in the 19th century are still in use today....[5]

If the nature of recruiting activities had changed little, the magnitude of the DoD-wide effort had changed even less. As Table 1 indicates, although the total DoD recruiting budget nearly doubled from 1961 to 1969, both the total number of recruiters and the total recruiting budget as a percent of the active duty manpower budget were extremely stable *despite the substantial enlisted force level variations indicated in Fig. 1 for the 1965-1970 time period.* Enlisted force increases of this period were accomplished at a time when recruiters were ineligible for proficiency pay. With no apparent need for an improvement in supply, recruiting efforts were correspondingly

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[5] See *Broadening the Recruiting Market*, prepared by Central All-Volunteer Force Task Force, OASD (M&RA), November 1972, Enclosure 1, p. 1.

Table 1

MAGNITUDE OF DoD RECRUITING, 1961-1969

Fiscal Year	Total DoD Recruiting Expenditures ($)	Total Recruiters--All Services	Recruiting Expenditures as % of Active Duty Manpower Budget
1961	68,189,378	7,114	0.0064
1962	65,338,518	7,219	0.0056
1963	63,861,457	7,070	0.0056
1964	64,080,526	6,903	0.0052
1965	72,326,959	7,056	0.0057
1966	90,715,842	7,241	0.0063
1967	96,864,035	7,371	0.0057
1968	102,274,489	7,176	0.0054
1969	125,317,150	6,987	0.0062

SOURCE: S. W. Kemp, *Productivity of U.S. Military Recruiting Systems*, Study IV, Studies for the President's Commission on an AVF, November 1970.

limited in scope and intensity; in fact, we would expect that it may have cost more, on an overall average, to draft a man than to recruit him.

These generalizations about the recruiting establishment do not mean that recruiting was or is performed by a central agency representing the Services. To the contrary, each Service maintains its own recruiting arm, organized as indicated in Table 2. These organizations have evolved within each service without common management guidelines, creating a complex amalgam of overlapping district, area, sector, station, substation, office, and detachment boundaries. This organizational variability complicates comparative analyses of recruiting operations, and organizational layering of each recruiting arm complicates management and control.[6]

[6] Ibid., p. 26.

Table 2

COMPARISON OF FIELD RECRUITING ORGANIZATIONS

Management Level	Name and Number of Elements			
	Army	Navy	Marine Corps	Air Force
Overall Management	Recruiting Command (1)	Recruiting Command (1)	Military Personnel Procurement Branch (1)	Recruiting Service (1)
Intermediate Management	Recruiting District (5)	Recruiting Area (8)	Recruiting District (6)	Recruiting Group (7)
Operational Management	Recruiting Main Station (64)	Recruiting District[a] (41)	Recruiting Station (47)	Recruiting Detachment (45)
Supervisory	Recruiting Area (256)	Recruiting Substation[b] (27)	(c)	Recruiting Sector (226)
Operations[d]	Recruiting Station (1629)	Branch Station (1080)	Recruiting Sub-Station (976)	Recruiting Office (890)

SOURCE: *Broadening the Recruiting Market*, prepared by Central All-Volunteer Force Task Force, OASD (M&RA), November 1972, p. 52.

[a] 160 zone supervisors work out of the recruiting districts; however, their areas of responsibility are not referred to as recruiting zones.

[b] Recruiting substations are used only when there are too many branch stations for the district to manage and supervise.

[c] Supervision accomplished by recruiting station.

[d] Another important operational component is the network of 74 Armed Forces Examining and Entry Stations (AFEES), managed by the Army for all of the Services.

One characteristic of the pre-AVF recruiting environment was an understandably low level of competition among the Services for recruits. Each Service emphasized recruitment of high-quality accessions, and each perceived its qualitative position to be satisfactory and likely to get better. As of March 1969, approximately 90 percent of all Navy and Air Force enlisted personnel fell into the top three mental categories (which represent the upper 70 percent of the tested population) as established by the Armed Forces Qualification Test (AFQT).[7] Many of the low-quality enlisted personnel accepted by the Services were admitted because the OSD regulatory authority was occasionally used to set qualitative accession quotas for the Services.[8]

In another important area, pre-Volunteer recruiters played a particularly limited role. A recruiter's primary function was to select new personnel, and he had little influence on their subsequent training or occupational assignments. As Table 3 indicates, a pre-Volunteer Air Force recruiter could offer a prospective recruit no more than the opportunity to enlist in one of four aptitude areas. Navy and Marine Corps recruiters could be slightly more specific in their commitments, guaranteeing qualified recruits formal training within one of several career areas. Only the Army offered prospective recruits the choice of a specific school as an option of enlistment.[9] However, as Table 3 indicates, these Army options applied to only a limited number of new accessions. Thus the average recruiter of the 1960s had little influence on the assignment of most recruits, and the average recruit faced a highly uncertain occupational future upon enlistment.

We can summarize the recruiting establishment of pre-Volunteer RCA as a small, stable body charged primarily with screening the available supply of prospective recruits to provide a manpower pool of high-quality accessions. Recruiters were not heavily involved in competing

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[7] See D. M. Reaume and W. U. Oi, *The Educational Attainment of Military and Civilian Labor Forces*, Vol. I, Studies Prepared for the President's Commission on an All-Volunteer Armed Force, November 1970.

[8] As in the now defunct Project 100,000.

[9] Strictly speaking, the 6-year enlistments offered in the Navy's Advanced Electronics and Nuclear Field options had the same effect.

Table 3
PRE-VOLUNTEER ENLISTMENT OPTIONS

Service	Enlistment Option	Assignment Guarantee	Comment
Air Force	• Mechanical • Administrative • General • Electronics	Training[a] in some specialty associated with aptitude area	• No specific school guarantee--maximum assignment uncertainty.
Army	• Regular Army	• None	• About 20 different options within service school and career group. Only about 20-25% of accessions chose these, and most of them did not get specific schools. Least--but still much--uncertainty.
	• Service school	• Specific school	
	• Career group	• Training[a] within group[b] of specialties	
	• Army Security	• Within Army Security Agency	
	• Army Air Defense	• Within Army ADC	
Marine Corps	• Regular	• None	• No specific school guarantee--much assignment uncertainty.
	• Aviation guarantee	• Training[a] in aviation specialty	
	• Ground guarantee	• Essentially non-aviation training	
Navy	• High school-Jr. college grad	• One of 60 schools in 5 career areas[b]	• Specific schools only for six-year advanced electronic and nuclear career areas. Only about 10% chose these, so much uncertainty for the majority.
	• Non-high school grad	• OJT	
	• Vocational school grad	• Advanced pay grade	

[a] Either classroom or OJT, at discretion of *Service*.

[b] Group, aptitude area, or career area selected by enlistee; specific specialty selected by *Service*.

for recruits, nor did they have much influence on the eventual assignments of those who enlisted. Although recruiters certainly practiced salesmanship in dealing with prospective enlistees, the demands placed on the recruiting establishment were, with some temporary and minor exceptions, consistently satisfied despite persistent de-emphasis of the "recruiting art." All in all, recruiters had negligible substantive impact on the character of military service experienced by most new recruits. Assistant Secretary of Defense (M&RA) Kelley commented on this in 1971:

> As long as you have something like the draft that you can always use, it is easy to go to the well and make up for your deficiencies....we have not demanded enough of our enlistment program.[10]

Classification

The second major functional group is that of classification. Classification is the process of describing and categorizing individuals, i.e., a process of collecting information and assessments on which enlistment and assignment decisions can be based. Unlike recruiting, classification is not something that a single specialized group of people do; some form of classification is performed by most personnel in the RCA system.

In the pre-Volunteer environment, classification standards and procedures varied significantly from year to year. Medical disqualification rates, procedures for assessing emotional stability, concern for drug abuse, consideration of criminal records, and the number and type of aptitude tests used to assess mental ability all varied from one period to another. But despite this apparent dynamism, classification was consistently and primarily concerned with determining:

- o whether a prospective recruit satisfied the *minimum* moral, medical, and mental qualifications for *any* form of military service and, if he did,

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[10] See Statement of Congressman William A. Steiger, *Hearings on Selective Service and Military Compensation*, p. 731.

- o his occupational aptitude profiles,
- o his vocational skills and education,
- o his occupational preferences, and
- o whether he satisfied *minimum* medical, mental, and security qualifications for jobs of higher risk or higher skill.

The tools and procedures used to elicit information on an individual's aptitudes, skills preferences, and potential for sensitive or physically demanding occupations varied widely from Service to Service. Figure 3 summarizes the major steps taken in the classification process of each Service. Screening at the Armed Forces Examining and Entry Stations (AFEES) represented the point at which minimum standards for military service were formally enforced, although prior to the AFEES exam individual recruiters could turn away prospective recruits who were physically unfit, who scored poorly on mental enlistment screening tests, or who admitted to histories that would disqualify them on moral grounds.[11]

The minimum standards enforced at the AFEES are set by the Congress and have been changed seldom in recent years. However, as Fig. 4 suggests, these apparently stable standards produced a definite trend of increasing disqualification rates among Selective Service draftees. This increase was almost entirely attributable to increasing medical disqualification rates. Mental disqualification rates declined and administrative (moral) rates remained stable in recent years. The increased medical disqualification rates throughout the 1960s have not yet been explained, although preliminary indications[12] suggest that they were largely attributable to more strenuous attempts to avoid the draft by many potential draftees.

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[11] The point at which an individual was classified as morally fit or unfit depended largely on (1) when, if ever, he voluntarily admitted his background, and on (2) the relationship between local recruiters and local school or law enforcement personnel. If an individual withheld information on his background, and local authorities refused to cooperate with recruiters, disqualification might not occur until his background was investigated subsequent to enlistment.

[12] See B. D. Karpinos, *Draftees: Disqualification for Military Service for Medical Reasons--An Analysis of Trends Over Time*, Human Resources Research Organization, Alexandria, Virginia, June 1972.

RECRUITER PRELIMINARY SCREENING	If passed, then → AFEES SCREENING	If passed, then → RECRUITER COUNSELING	If enlistment agreed, then → BASIC MILITARY TRAINING
AIR FORCE			
Moral[a] Legal[c] Mental + Aptitudes (AQE) (Full airman qualifying exam)	Mental (AFQT)[b] (Armed Forces qualification test) Physical (PULHES)[d]	Explain options and counsel	Reception Center: Lackland AFB • Advanced physicals • Stability and security assessments • Occupational preferences • Previous skills assessments • Specialized tests (e.g., language)
ARMY			
Moral[a] Legal[c] Mental (Enlistment screening test)	Mental (AFQT)[b] Aptitudes (AQB) (Army qualification battery) Physical (PULHES)[d]	Explain options and counsel	Reception Centers: Ft. Dix, Ft. Jackson, Ft. Knox, Ft. Leonard Wood, Ft. Ord, Ft. Polk • Aptitude testing (ACB) (Army Classification Battery) • Advanced physicals • Stability and security assessments • Previous skills • Specialized tests • Officer candidate test (for those qualified)
MARINE CORPS			
Moral[a] Legal[c] Mental (Enlistment screening test)	Mental (AFQT)[b] Aptitudes (AQB) Physical (PULHES)[d]	Explain options and counsel	Recruit Depots: San Diego, Parris Island • Aptitude testing (Basic classification test battery) • Advanced physicals • Stability and security assessments • Previous skills • Specialized tests
NAVY			
Moral[a] Legal[c] Mental (Applicant qualification test)	Mental (AFQT)[b] Aptitudes (AQB)[e] Physical (PULHES)[d]	Test for aptitudes (Short basic test battery) Explain options and counsel	Naval Training Centers: Orlando, Great Lakes, San Diego • Aptitude testing (Basic test battery) • Advanced physicals • Stability and security assessments • Previous skills • Specialized tests

[a] Type of screening depends on cooperation of local police and school authorities.

[b] Minimum mental standards are also a legal requirement.

[c] Age, citizenship, dependency, etc.

[d] Psychologists also available for mental testing.

[e] Only for those ≤ 30th AFQT percentile.

Fig. 3 -- Pre-Volunteer classification process

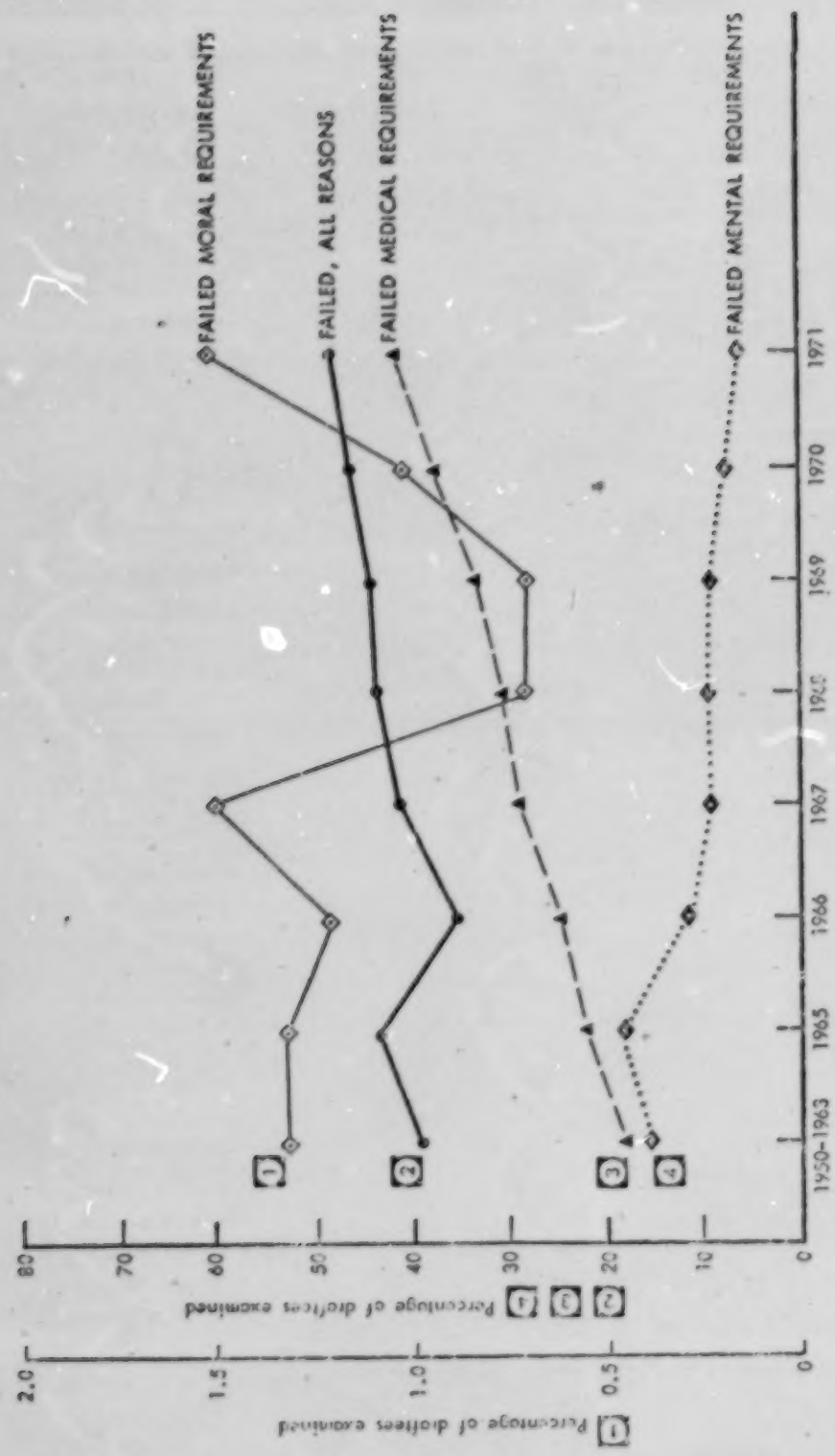

Fig. 4 -- Pre-Volunteer disqualification rates

Although the *minimum* mental and physical standards for enlistees and draftees were identical, the Services have traditionally selected individuals of higher mental ability first. In effect, the Services had a "hip-pocket" mental standard for enlistees which was somewhat higher than stated by regulations. Hence the mental disqualification rate of Fig. 4 understates the "true" disqualification rate of draftees, who were often motivated to disclose potentially disqualifying traits. The disqualification rate for draftees could be expected to differ from that for prospective enlistees, who presumably did not want to be disqualified. Since the medical disqualification rate of Fig. 4 overstates the rates experienced by enlistees, it represents only a best available approximation to actual pre-Volunteer enlistment standards.[13]

If an individual satisfied the minimum qualifications for military service, it was up to the Services recruiting him to continue his classification. This process involved the use of specialized aptitude tests, personal interviews with recruiters and/or occupational counselors, intensive background checks for some occupations, and a second physical examination. The purpose of these classification steps was twofold: first, to determine which jobs an individual was *minimally* qualified to hold in terms of mental, medical, and educational standards; second, to provide test data on occupational preferences. The classification process actually tested an individual against two different sets of "minimum" standards: the minimum legal standards for service in the Armed Forces, and the minimum (and more stringent) standards associated with specific occupational assignments.[14]

There appears to have been little difference between the Services' physical requirements for various occupations. Mental requirements, on the other hand, varied widely from Service to Service, as indicated in Table 4. By comparing the minimum requirements for each Service

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[13]Other data, such as Fig. 2, are available to describe those individuals *accepted* for enlistment. Here, however, we are concerned with describing those who were *disqualified*.

[14]If an individual passed the first set of minimum standards (for legal service in the military), he was assured that at least some jobs in each service would be available to him. In order to qualify for many jobs he would have to exceed the legal minimum for the Services.

Table 4

SERVICE QUALITY REQUIREMENTS

FY 1973 Accessions

(Includes Requirements of Career Progression)

Service	AFQT Mental Categories	Task Force Computation Based on:		
		Service[a] Aptitude Scores	Mean[b] Aptitude Scores	Lowest[c] Aptitude Scores
Army	I & II	21.7%	21.6%	21.3%
	III	56.9%	57.0%	57.3%
	IV	21.4%	21.4%	21.4%
	Total	100.0%	100.0%	100.0%
Navy	I & II	36.0%	33.0%	24.0%
	III	53.7%	55.1%	58.7%
	IV	10.3%	11.9%	17.3%
	Total	100.0%	100.0%	100.0%
Marine Corps	I & II	37.4%	30.7%	22.2%
	III	50.1%	53.4%	56.1%
	IV	12.5%	15.9%	21.7%
	Total	100.0%	100.0%	100.0%
Air Force	I & II	41.0%	34.5%	25.5%
	III	50.9%	54.2%	58.0%
	IV	8.1%	11.3%	16.5%
	Total	100.0%	100.0%	100.0%

SOURCE: *Qualitative Accession Requirements*, prepared by Central All-Volunteer Force Task Force, OASD (M&RA), November 1972.

[a] Each Service maintains its prevailing minimum standards by occupation.

[b] Each Service revises to average minimum of all Services.

[c] Each Service revises to lowest standard required by any Service.

for similar occupations, the Central All-Volunteer Task Force was able to compare the qualitative requirements of the Services under three different assumptions:

1. Each Service maintains its prevailing minimum standards by occupation.
2. Each Service revises its standards to conform to the minimum requirements obtained by averaging the prevailing standards of all Services.
3. Each Service revises its standards to conform to the least demanding minimum standard of any Service.

As Table 4 indicates, varying the minimum occupational qualifications in this manner resulted in substantial variation in the total qualitative requirements of the Air Force, Marine Corps, and Navy. Little variation occurred in the Army because the Army typically required the lowest aptitude scores to qualify for a given occupation. For each Service, the greater the variation, the higher its minimum standards were in relation to those of the other Services. Thus the minimum occupational mental standards used by each Service varied substantially.

As indicated earlier, the purpose of the classification efforts of the Services was twofold: to apply minimum occupational standards and to collect additional information on an individual's aptitudes and preferences. The minimum standards were used to determine which jobs an individual was *qualified* to hold; the aptitude and preference data were later used to determine which of those jobs he actually would hold. On paper, an individual's aptitudes and occupational preferences represented significant classification outputs.

In practice, however, getting a recruit's occupational preferences received less emphasis than testing his aptitudes. Occupational counseling in the Army and Air Force often consisted of only superficially

familiarizing the recruit with the jobs available to him.[15] For example, in 1971 the Air Force counseling process was described as follows:

> Career counseling takes place during a three-hour session, with the airmen assigned to groups according to aptitude areas in which they were enlisted. Each airman has his own ATC Form 530 on which his PULHES, color vision, aptitude, and special test scores have been printed. A list is provided itemizing each Air Force Specialty for which a quota exists during the week that the group will be graduating. Special prerequisites for entry into the AFSC, such as security clearance, color vision, and academic attainment, are identified.
>
> A brief verbal description of the nature of each AFSC is given. Each airman chooses three job preferences, with an administrative constraint that only two of the three may be jobs that require special assessment for special prerequisites as part of the classification process.[16]

As this description suggests, occupational counseling was not a heavily emphasized classification activity. Little effort was expended by the Army and Air Force to familiarize a new recruit with the occupational characteristics of the jobs available to him. In effect, the pre-Volunteer classification process was simply a screening process which identified those jobs an individual was minimally qualified to hold and provided additional information on his aptitudes and, less importantly, his occupational preferences.[17]

Assignment

While simple in concept, the assignment function was complicated in practice. Assignment decisions were based on a multitude of factors,

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[15] It appears the Navy did a more extensive job of occupational counseling than the Army or Air Force. However, because of differences in enlistment options and assignment techniques, the systems cannot be directly compared.

[16] See F. D. Harding and John A. Richards, *A Descriptive Analysis of the Classification, Assignment and Separation Systems of the Armed Services*, Air Force Human Resources Laboratory, Air Force Systems Command, AFHRL-TR-71-15, May 1971, p. 6.

[17] Two potential ambiguities in this description should be clarified. First, in the event the recruit had been given some form of occupational commitment at enlistment, he would already have passed the minimum qualifications for that occupational area or specialty. Second,

including available job and training program openings, priorities for the staffing of certain occupations, previous commitments made by recruiters, transportation costs, and aptitude scores. Assignments generally had to be selected from openings available during the first week following graduation from Basic Military Training (BMT). These assignments were usually made by computer, using automated assignment rules to reconcile available personnel with manning objectives for that week. Although the details of the pre-Volunteer Army, Navy, and Air Force automated assignment systems were significantly different, the basic characteristics of each were similar.[18] The hierarchy of objectives and constraints satisfied by these systems is summarized in Fig. 5.

As Fig. 5 indicates, the honoring of recruiting commitments was given highest priority in the assignment of trainees. However, as Table 3 suggested, recruiting commitments were generally so broad that they posed few obstacles to other assignment objectives. Therefore, the most important assignment objective was to fill Service school openings. Since the Services typically regarded schools for which high aptitudes were required as high-priority schools, high-quality recruits were assigned to those schools until all such schools were filled. Since these were typically difficult to fill (in fact, that is generally why they were designated as high priority in the first place), the net result tended to be assignment of high-quality recruits to high-priority *jobs*.[19] The hierarchy of Fig. 5 indicates that personal preferences and/or counselor recommendations were given greater consideration than aptitudes; in practice the opposite was often true.[20] Indeed, it is generally fair to describe the pre-Volunteer assignment process as dominated by the practice of assigning people to jobs on the basis of a matching of aptitudes and school-related aptitude requirements.

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because all occupational specialties have some minimum aptitude requirement, aptitude scores serve as both a qualification criterion and as an index of which job he is *best* qualified to hold among those jobs he qualifies for.

[18] The Marine Corps used the Army System.

[19] Assignment to a school in most cases implies subsequent assignment to a related job.

[20] Army personnel whom we interviewed estimated, for example, that only about 10 percent of Army first-term enlisted personnel without enlistment obligations were assigned to the jobs recommended for them by vocational counselors.

1. HONOR RECRUITING COMMITMENTS,

THEN

2. FILL SCHOOLS IN ORDER OF PRIORITY ASSIGNED TO EACH BY SERVICE,

THEN

3. WHENEVER POSSIBLE, FILL EACH SCHOOL WITHOUT VIOLATING MINIMUM QUALIFICATION STANDARDS (PHYSICAL, MENTAL, ETC.),

THEN

4. MINIMIZE TRANSPORTATION COSTS OF SCHOOL ASSIGNMENTS (ARMY AND NAVY ONLY),

THEN

5. MAXIMIZE PREFERENCES AND/OR COUNSELOR RECOMMENDATIONS,

THEN

6. MAXIMIZE APTITUDES OF THOSE ASSIGNED TO CLASSES,

THEN

7. ASSIGN REMAINING TRAINEES TO DIRECTED DUTY ASSIGNMENTS IN ACCORDANCE WITH SERVICE PRIORITIES, TRANSPORTATION COSTS, PREFERENCES, RECOMMENDATIONS, IN THAT ORDER.

Fig. 5 -- Hierarchy of assignment objectives

This is an important point because it implies that *the entire pre-Volunteer process can be approximated as a sequence of screening operations which identified those jobs which a recruit was eligible to hold and then selected one job from among the eligibles primarily on the basis of Service established priorities and the recruit's aptitudes.* This simple characterization captures the sense of the RCA process in a draft-dependent environment, an environment in which few inducements and concessions to the interests of the prospective recruits or enlistees were required to maintain a high-quality supply of non-prior service (NPS) accessions.

An important aspect of this characterization is its concentration of decisionmaking authority within the assignment arena. Neither the recruits nor the recruiters and counselors had much influence on a recruit's eventual disposition. The assignment arena had most of the authority, and the authority was exercised along lines that emphasized the importance of aptitude test scores.

This importance warrants a brief description of how aptitude requirements for various occupational specialties have been estimated by the Services. The chief ambiguity in this estimation has been how to measure what a job requires of an individual. Indeed, because so many unresolved issues concerning manpower costs and productivity are involved in this measurement, the Services have found it difficult to relate the demands of jobs to the aptitudes of individuals.[21] Consequently, one of the chief influences in establishing aptitude requirements for occupational specialties has not been the jobs themselves, but the training programs that are prerequisites for the jobs.[22]

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[21] See, for example, J. A. Sullivan, *Measured Mental Ability, Service School Achievement and Job Performance*, Center for Naval Analyses, Professional Paper No. 42, July 1970.

[22] See, for example, the testimony of Brig. Gen. Conrad S. Allman, Commander, U.S. Air Force Recruiting Service, and testimony of Hon. James E. Johnson, Assistant Secretary of the Navy for Manpower and Reserve Affairs, *Hearings before the Special Subcommittee on Recruiting and Retention of Military Personnel*, House of Representatives, Committee on Armed Services, 92d Cong., Washington, D.C., 1972.

Another influence has been the quality of available manpower. The quality available tends to become the quality "required."[23]

Minimum requirements for entry into a particular occupational speciality have been influenced by the needs of the training commands for students with reasonable probabilities of passing technical training courses. Aptitude test scores have consistently shown modest correlations with successful performance in training.[24] Since the average enlisted man in the Armed Services receives approximately six months of formal training at a cost of $4000 to $5000,[25] this is clearly an important consideration, but only one of many that would ideally influence the minimum requirements. Nonetheless, one of the more important aspects of the pre-Volunteer RCA process was its dedication to assignment-by-aptitude-matching, a philosophy anchored more than anything else to the perceived needs of the training establishment.

SUMMARY

The pre-Volunteer RCA process we have sketched is summarized in Fig. 6. As the diagram suggests, this was a relatively simple process in which major influences and decisionmaking authority were concentrated in the classification and assignment areas. But even this simple diagram overly complicates matters; the most important characteristic of the pre-Volunteer environment was the virtual guarantee, via the draft and its pressures, of a ready supply of high-quality personnel to fill the needs of the Armed Services. As we shall see, in the absence of such a guarantee much has changed.

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[23] See, for example, *Qualitative Accession Requirements*, and Taylor, et al., *Palace Quality*, p. 39.

[24] See Sullivan, *Measured Mental Ability*.

[25] W. Y. Oi and B. G. Forst, *Manpower and Budgetary Implications of Ending Conscription*, Vol. I, Studies Prepared for the President's Commission on an All-Volunteer Armed Force, November 1970.

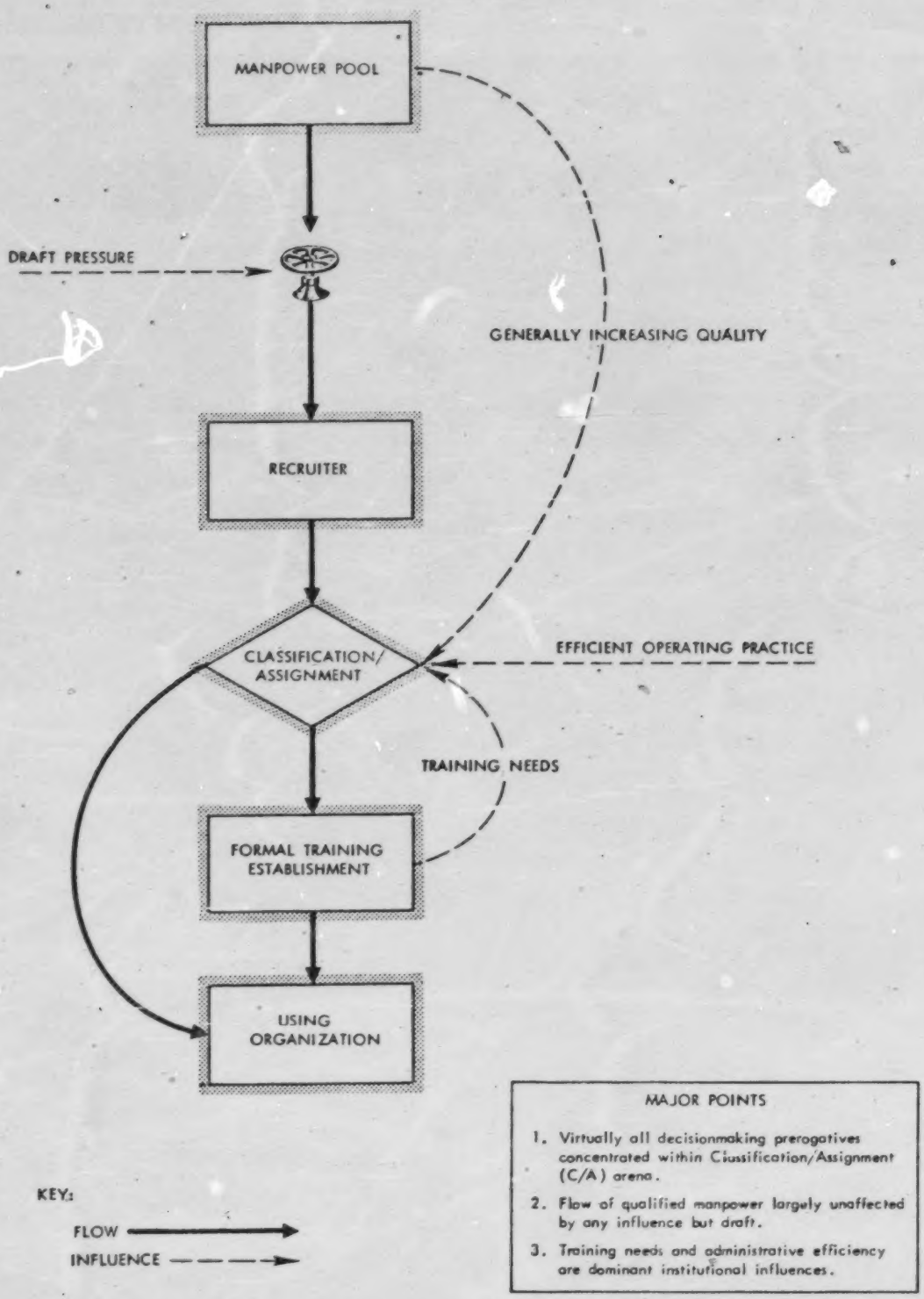

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Fig. 6 -- The pre-Volunteer RCA process

II. THE ALL-VOLUNTEER RECRUITING, CLASSIFICATION, AND ASSIGNMENT PROCESS

OVERVIEW

Just as the existence of the draft was the central factor underlying the operational characteristics of the pre-Volunteer RCA process, the absence of a draft-guaranteed supply of quality accessions has been the dominant factor in shaping the adjustments and adaptations made in this area. As depicted by Fig. 7, the present RCA process is considerably more complex then its predecessor. This relative complexity can be traced to two fundamental changes:

1. Decisionmaking authority has been diffused over a greater number of participants, including prospective recruits themselves.
2. Elimination of the draft has underscored the importance of several major institutional influences and interrelationships affecting the structure and operation of the RCA systems.

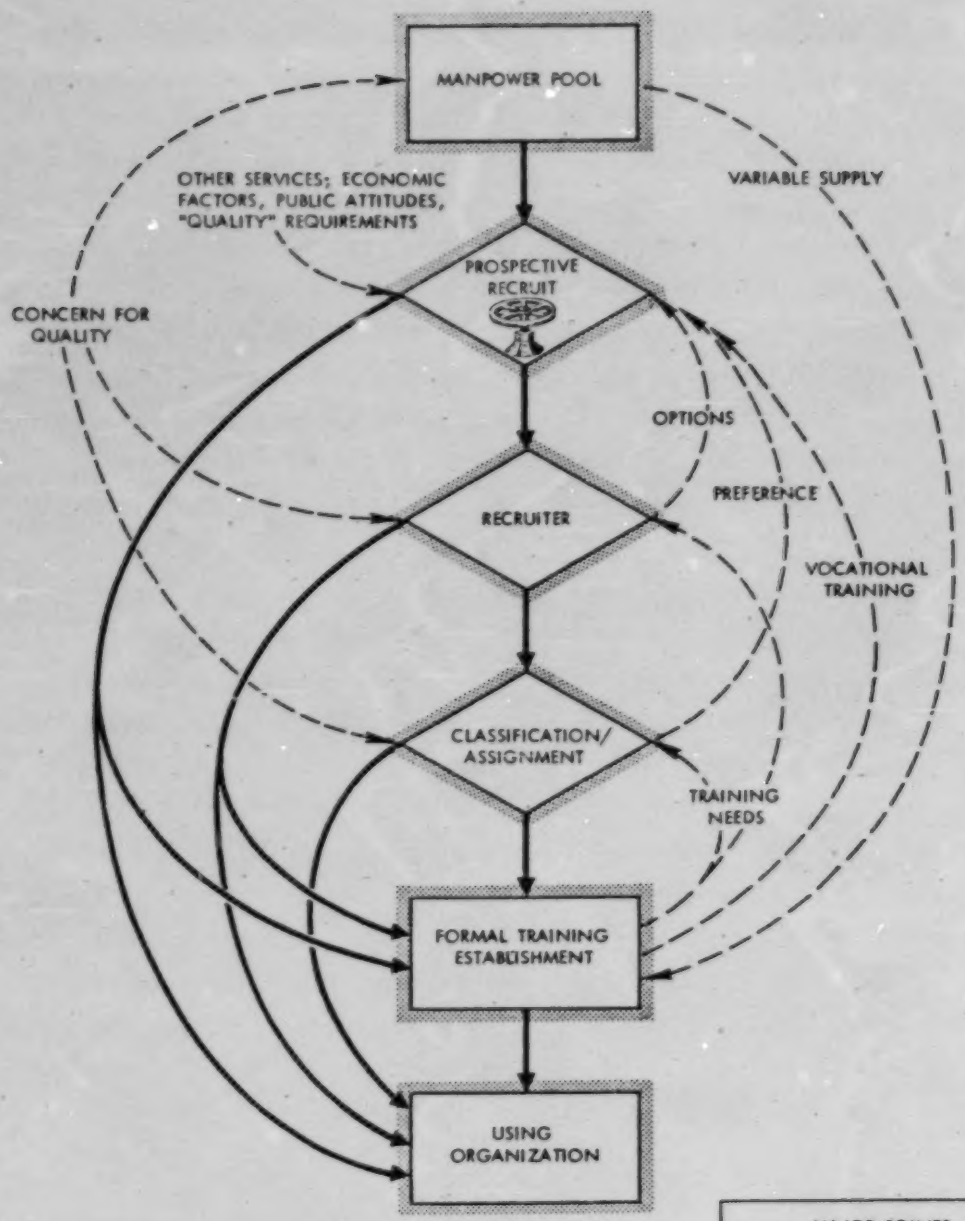
These fundamental changes are related in that the diffusion of authority is itself a consequence of seven major influences affecting the RCA process. In this section we examine these important influences from the standpoint of how each relates to the pre-Volunteer environment and how each is affecting the present system.

MAJOR UNDERLYING INFLUENCES OF THE RCA PROCESS

Influence 1

Although the supply of military manpower appears adequate at this time, future supply will be more speculative than in pre-Volunteer years.

One important characteristic of the AVF RCA process is that the supply of new accessions is now subject to influences which the Services may find difficult or impossible to control. The notion of "adequacy of control" is vital since supply uncertainties do not in themselves preclude the possibility of rational and efficient manpower



35 Fig. 7 -- The all-Volunteer RCA process

planning. Even with the draft in force the number of new recruits in any given time period could not be predicted with complete accuracy. And the supply of volunteers has always been subject to significant seasonal fluctuations. Yet these uncertainties were easily accommodated by the manpower management system, because whenever the flow of volunteers ran low, draft calls would be raised to stimulate the flow of draft-induced volunteers. Thus the central question is not whether there are uncertainties in the supply of manpower, but whether these uncertainties can be forecast and planned around.[1] As Fig. 7 suggests, such planning would involve at least four important factors:

1. The intensity of competition among the Services for the available supply, especially in terms of the distribution of high-quality recruits.
2. Economic factors, both local and national.
3. Public attitudes toward the military in general, and public perceptions of the benefits (training, pay, etc.) of military service.
4. The qualitative recruiting goals of the Services.

Clearly these factors are not all easily forecast or controlled. Only the last two can be significantly affected in the short run by the Services themselves, and even these may require Congressional approval. The Services can lower their qualitative requirements, or they can attempt to increase the attractiveness of military service.[2] With regard to the former, there has been no significant redefinition of qualitative requirements insofar as recruiting is concerned. In fact, the Services want a force of greater quality than they had when the draft

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[1] We assume that there is a genuine need for such planning, i.e., that the total supply situation is not so attractive as to make concern for manpower procurement moot.

[2] At this point we are excluding certain other options such as the large-scale introduction of women into the Armed Services.

was in effect.[3] As for the latter, the most recent pay increases are probably the clearest example of attempts to increase the attractiveness of military Service by improving benefits. The widely publicized efforts[4] of the Army's Project Volar to eliminate disagreeable practices such as reveille, bed check, and sign-in, sign-out requirements are other examples of apparently costless attempts to improve attractiveness. Perhaps the greatest efforts have been devoted to reducing the uncertainty facing prospective recruits by offering them the opportunity to make certain important decisions for themselves.

The acid test of the efficacy of efforts to improve the attractiveness of military service must still be the Services' capacity to attract and retain sufficient volunteers to sustain authorized manning levels within the limits of largely self-imposed qualitative constraints. At present, by this criterion the recruiting performance of the last year yields ambiguous results. Certainly there is a more than adequate supply of volunteers, but doubts remain concerning the quality of these recruits in relation to the needs of the Services.[5] It is simply too soon to tell whether the Services can attract enough high-quality volunteers to sustain previous levels of manpower quality. Predictions in this regard must account for potential changes in public attitudes, declining U.S. involvement in Southeast Asia, local and national economic factors, and the efficiency of the recruiting commands, each of which may inject substantial variability into the magnitude and quality of the future supply of recruits.

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[3]See, for example, "Big Changes in the Army: An Interview with General William C. Westmoreland," *U.S. News & World Report*, June 19, 1972. And "People, Our Most Important and Most Expensive Asset," by Robert C. Seamans, Jr., Secretary of the Air Force, *Air Force Magazine*, March 1973.

[4]See, for example, U.S. Army, Infantry School, *The Benning Plan for a Modern Volunteer Army*, Fort Benning, Georgia, January 27, 1971.

[5]In July 1973 the Army announced a new program to permit more non-high school graduates to enlist in the Army. This reversed the policy that concentrated on enlisting at least 70 percent high school graduates and was a direct result of the Army's inability to recruit enough volunteers. As late as August 30, 1973, enlistments in the volunteer Army were still some 19 percent below the targeted figure for that month. Similarly, the Marine Corps was 17 percent below target, while the Air Force and Navy met or exceeded their goals.

The Services and OSD have implemented several changes that may reduce some of these uncertainties. First, increased use is being made of Delayed Entry Enlistment, in which prospective recruits may sign up for specific occupational openings six months in advance of their actual entry into Service. These delayed enlistment pools permit some manpower stockpiling against future demand.[6] Additionally, the availability of larger advertising budgets and expanded recruiting forces gives OSD and the Services a flexible mechanism for focusing emphasis on the most attractive local recruiting markets. Despite these steps, it is still reasonable to characterize the present supply situation as not immune to substantial future variability.

Influence 2

Changes in recruiting practices and procedures have increased a prospective recruit's freedom of choice, an adaptation which has greatly increased the importance of competition as a means of distributing recruits among Services and, within each, among jobs, units, or bases.

The recruiting commands are now significant decisionmaking centers involved with assisting recruits to exercise their freedom of choice. In response to volunteerism, recruiting efforts have been both expanded and intensified, with particular emphasis placed on the role of the recruiter as a counselor who can advise prospective recruits on the expanded enlistment options available to them. Table 5, which extends the data of Table 1 into the present and near future, indicates the magnitude of the recruiting expansion of recent years.

The basic role of a recruiter has also changed substantially. As Fig. 7 suggested, recruiters are now executing many of the classification and assignment functions previously performed only after a recruit had formally enlisted and arrived at a basic training center. This permits those recruits who qualify to select from a greatly expanded menu of enlistment options.

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[6] Although they also raise the possibility of overstocking certain occupations if requirements cannot be suitably forecast or major changes in demand occur. In this regard, in a recent three-month period the requirement for one Air Force AFSC varied from 4177 to 1600 to 3100.

Table 5

EXPANSION OF RECRUITING EFFORTS

Service and Year	Personnel	Advertising	Facilities, equipment, and supplies	Travel, training and other	Total	Number of Production Recruiters
Army:						
1970	34.5	2.6	4.3	5.6	47.0	2,136
1971	43.5	18.6	6.1	5.6	73.8 [a]	2,532
1972	47.2	22.4	21.3	8.0	98.9	4,725
1973	69.5	26.7	22.6	21.1	139.9	4,725
1974	73.3	34.9	23.8	23.8	155.8	4,725
Navy:						
1970	29.8	1.5	4.6	1.2	37.1	2,334
1971	35.7	1.5	5.0	1.4	43.6	2,334
1972	33.5	6.6	8.4	1.5	50.0	2,834
1973	45.2	20.0	18.2	2.5	85.9	3,600
1974	53.1	24.9	22.3	1.9	102.2	3,600
Marine Corps: [b]						
1970	11.4	0.9	1.3	2.0	15.6	1,292
1971	12.5	1.0	1.8	2.2	17.5	1,356
1972	17.9	4.0	4.0	4.3	30.2	1,756
1973	21.6	6.4	5.4	5.2	38.6	1,833
1974	22.2	7.4	4.1	7.4	41.1	1,833
Air Force:						
1970	21.6	1.7	0.8	2.8	26.9	1,459
1971	23.6	1.4	1.6	1.6	28.2	1,312
1972	32.0	7.1	3.1	3.5	45.7	1,931
1973	38.5	12.7	2.1	6.8	60.1	1,931
1974	39.2	17.1	3.0	7.0	66.3	1,931
DOD total:						
1970	97.3	6.7	11.0	11.6	126.6 [§]	7,223
1971	115.3	22.5	14.5	10.8	163.1 [§]	7,534
1972	130.6	40.1	36.8	17.3	224.8 [§]	11,246
1973	174.8	65.8	48.3	35.6	324.5 [§]	12,089
1974	187.8	84.3	53.2	40.1	365.4 [§]	12,089

[a] Revised Army total.

[b] Revised Marine Corps data.

[§] Revised DOD totals.

SOURCE: Testimony of Gen. Robert H. Montague, Special Assistant to the Assistant Secretary of Defense (Manpower & Reserve Affairs), for All-Volunteer Force Action, DOD Appropriations Hearings, Subcommittees of the Committee on Appropriations, House of Representatives, 93rd Congress, First Session.

Table 6 describes the enlistment options available to prospective recruits today and indicates major additions and changes to these options since about 1970. As indicated, recruits have more freedom of choice, a freedom which requires the active participation of recruiters as counselors, classifiers, and assigners.

Enlistment options vary widely, with the Army offering the greatest number and the greatest latitude to prospective recruits. The most common characteristic among enlistment options is some form of guaranteed training and/or occupational assignment. All Services offer these, with the Army offering greater flexibility in terms of assignment to particular units, bases, and geographic areas.[7] Approximately 80 percent of all Army and Navy recruits and 50 percent of Air Force recruits are now entering service with some form of commitment which must be honored. This accounts for the great reduction in uncertainty facing many recruits, and enhances the attractiveness of military service at no small cost to managerial flexibility.

The minimum physical and mental requirements for various occupational specialties have not undergone any significant change as a result of the transition to volunteerism. Nonetheless, in comparison with the pre-Volunteer RCA process, assignment decisions made by recruits as a condition of enlistment are fundamentally different than those previously made at basic training assignment centers. Once a recruit's physical and mental qualifications have been established, it is often up to him to select from among the list of eligible jobs. His preferences may not reflect the priorities established by the Services for the manning of various occupations, and they need bear no relationship to the job which might have been selected under an aptitude-matching criterion. Recruiters are well apprised of the needs and interests of their respective Services and are undoubtedly in a position to try to influence a recruit's decision in those directions, but the

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[7] The Air Force apparently experimented with a base-of-choice option for its six-year enlistees and dropped it after finding that 80 percent of those using the option wanted to change their choice by end of training.

Table 6

CURRENT ENLISTMENT OPTIONS

Service	Major Enlistment Options	Available Pre-Volunteer?	Comments	Estimated % of 1973 Accessions Electing[5]
Air Force	• Aptitude area	Yes	• General, Admin., Elec., Mech.	50%
	• Guaranteed training	No	• Includes about 140 different specialties	50%
Army	• Unit of choice[a]	No	• Combat units only (14 suc	42.1%
	• Special unit[a]	No	• Non-combat units only (23 such)	
	• Station of choice[a]	No	• About 41 posts included	
	• Service school	Yes[b]	• About 220 schools	22.2%
	• Career group	Yes[b]	• About 60 career groups, each with 4-5 specialties	
	• Travel and training	Yes[b]	• Guarantees travel + one of three school or 15 career groups.	
	• Regular army	Yes	• No guarantees	21.6%
	• Other	Yes	• Includes lateral entry, language schools, etc.	14.1%
Navy	• Guaranteed occupational area	Yes[b]	• About 18 areas, each with about six schools	40%
	• Guaranteed school	No	• Picks specific school from above	40%
	• Three-year options	No	• Includes seafarer, aviation options	15%
	• Other	Yes	• Includes lateral entry	5%
Marine Corps	• Ground program	No	• 13 options including 5 groups of specialties and 8 specific specialties	30%
	• Aviation program	No	• 3 options, all representing groups of specialties	10%
	• General enlistees	Yes	• No guarantees	60%

[5]These percentages are very approximate in that they depend substantially on supply and recruit preferences, either of which can change significantly from month to month.

[a]Option generally implies additional, although limited commitments to specialties or groups of specialties.

[b]Yes, but significantly revised.

final decision now belongs to the recruit. This is a major departure from previous policy.

To expedite the implementation of this freedom of choice, the Services are changing the operating characteristics of recruiting activities. For example, there is a trend in the direction of improving vocational counseling procedures and counseling aids.[8] Greater emphasis has also been placed on using regular enlisted personnel as supplementary recruiters temporarily assigned to their own hometowns to advise friends and acquaintances of the opportunities and drawbacks of Service life.[9] Through use of the delayed enlistment program and semiautomated forecasting and assignment procedures, recruiters are now usually able to offer a recruit openings available during the following six months, as opposed to the one-week planning horizon of pre-Volunteer days. This semiautomated process has reduced earlier dependence on recruiting quotas by permitting recruiters to interact by phone with a central source of current information on enlistment needs and openings.[10] And finally, the Army has decentralized recruiting responsibility somewhat by encouraging units and bases to recruit their own personnel. During its first full year (FY 1972) the Army Unit of Choice Enlistment Option[11] accounted for 17,000 combat arms enlistments, 45 percent of all such enlistments for that year.

As these discussions show, recruiting is becoming increasingly competitive. Not only is each Service generally in competition with the others,[12] but individual occupational specialties, units, bases, and

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[8]The Air Force has expanded its counseling at Lackland Military Training Center to a level previously reserved only for enlistees applying for particularly sensitive jobs (the so-called Assessment AFSCs).

[9]The Army assigns approximately 100 such soldiers to their hometowns every week; each remains there to assist regular recruiters for about one month. See Maj. Gen. John Q. Henion, "The Big Push to Man Army of Volunteers," *Army*, October 1972.

[10]Such as the Accessions Control Center, part of the PROMIS Information System initiated by the Air Force and duplicated by the Navy.

[11]Under which, for example, the 82d Airborne Division can recruit its own personnel, who enlist specifically for that unit.

[12]See, for example, "AF Leads Quality Race," *Air Force Times*, Vol. 31, No. 51, July 26, 1972.

local recruiting stations are often implicitly in competition with one another through various enlistment options. Thus both interservice competition and intraservice competition for recruits are emerging, each strongly influenced by the total available supply of manpower and the extent to which prospective recruits are able to exercise their own preferences.[13]

In sum, the recruiting activities of the Services represent one area in which many important adaptations to volunteerism have been made. Many responsibilities previously reserved for the classification and assignment personnel of pre-Volunteer RCA have been absorbed by recruiters, who now represent in microcosm virtually all of the important functions of the entire RCA process. *Consequently, recruiting has been elevated from a relatively perfunctory activity to what is probably the single most important function in the AVF RCA process.*

Influence 3

The principal qualitative procurement objective of the Services is to maintain or improve pre-Volunteer standards.

Although the minimum mental and physical requirements for various occupational specialties have not undergone any significant change, the Services are attempting to improve *actual* force quality both by attracting higher quality individuals and by improving classification standards to identify important personal attributes other than aptitudes. In this regard, recruiters and occupational counselors at basic training centers are attempting to improve the precision with which they can identify individuals with criminal backgrounds, records of emotional instability, and histories of drug abuse. If successful, this may reduce incidence rates of disciplinary actions and premature discharges. Additionally, the Services are attempting to accommodate the preferences of recruits even if not required by the enlistment contract to do so. The logic

[13] Inasmuch as OSD no longer possesses the authority to establish qualitative recruiting objectives for the Services, this emerging competition has been regulated primarily by a mutual perception of common interests among the Services themselves. OSD can now regulate only indirectly through control of advertising budgets and force level recommendations. See Public Law 92-204, Section 744, approved December 18, 1971.

behind this change is that it is easier to induce a prospective recruit to enlist without a binding commitment if he has some confidence that his subsequent wishes will be seriously considered in selecting his occupational specialty. Furthermore, there is a growing belief that a strict aptitude-matching assignment philosophy understates the importance of motivation to performance. In short, performance may improve if greater weight is given to those preferences.

Thus classification standards have shown some movement away from their traditional focus on aptitudes. However, this shift is only affecting man/job matches when the individual can satisfy the traditional minimum criteria for a job. Clearly, the qualitative objective of the AVF is to maintain or improve pre-Volunteer quality standards.

Efforts to reach this objective have had mixed success. The two most common indicators of accessions quality--distribution by Mental Group and percentage of high school graduates--show slight but conflicting indications of change. Figure 8 summarizes mental ability trends by service. As indicated, the percentage of Mental Group I and II personnel has held nearly constant, while the percentage of Group III personnel has increased and that of Group IV decreased. The reduction in Group IV percentage is generally regarded as a positive change.

Educational attainment, as approximated by high school graduation, indicates a slightly different qualitative trend. As shown in Fig. 9, the percentage of new accessions who are high school graduates declined in the first nine months of FY 1973. Since educational level is generally a more powerful indicator of individual performance than AFQT scores, this decline may have offset the improvements suggested by Mental Group distribution. Overall, the qualitative position of the Armed Services has apparently changed little under volunteer conditions.[14]

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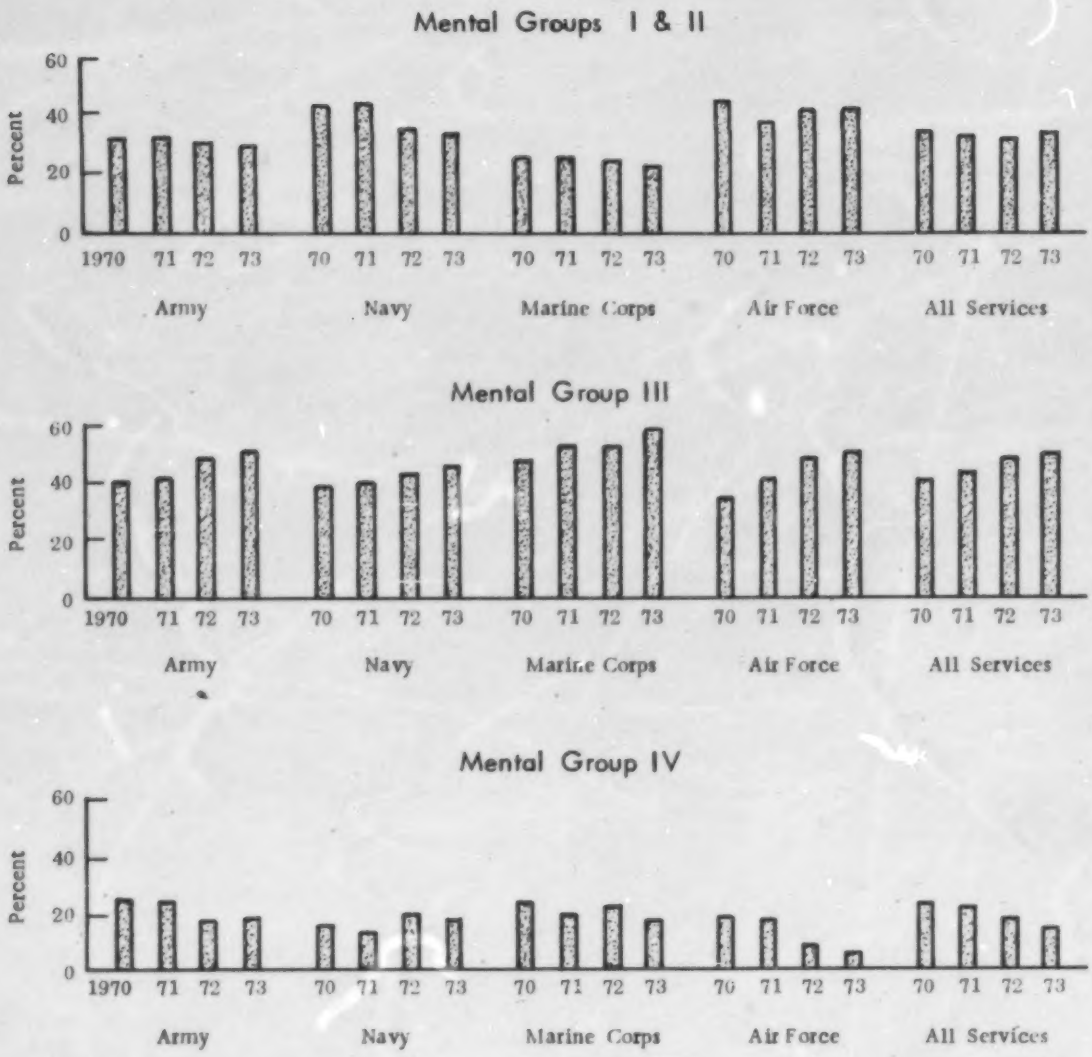
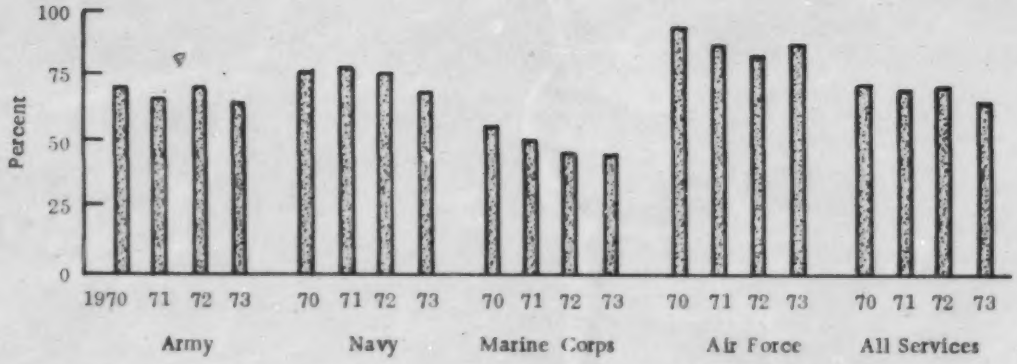
[14] Since prevailing measures of quality do not explicitly reflect attitudes, motivation, or methods of job selection, it is possible that qualitative improvement resulting from change in any of these could be occurring but not reflected by AFQT or high school graduation distributions.



Source: Department of Defense, Office of the Assistant Secretary of Defense, Manpower and Reserve Affairs (Feb. 1973)

Fig. 8--Percentage distribution of new accessions by service and AFQT mental group, FYs 1970-1973 (data for first nine months of FY 1973)



Source: Department of Defense, Office of the Assistant Secretary of Defense, Manpower and Reserve Affairs (Feb. 1973); and Department of Labor, Bureau of Labor Statistics (April 1973)

Fig. 9--High school graduates: initial accessions by service, FYs 1970-1973 (data for first nine months of FY 1973)

Influence 4

Traditional and largely self-imposed restrictions on the supply of potential recruits are still in effect.

Traditional restrictions on the supply of individuals eligible for military service remain substantially unchanged. In addition to the minimum mental requirements previously discussed, two major restrictions remain:

1. Physical standards will eliminate an estimated 11 percent of all volunteers, compared with a rate of 10 percent for pre-Volunteer applicants for enlistment (not draftees).[15]
2. Limitations on the participation of women, although less restrictive than in pre-Volunteer periods, are still stringent.

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[15] Data provided by Bernard K. Karpinos, Human Resources Research Organization (May 1973) to M. Binkin and J. D. Johnston, *All-Volunteer Armed Forces: Progress, Problems, and Prospects*, Report prepared for the Committee on Armed Services, U.S. Senate, 93rd Cong., 1st Sess., June 1, 1973, p. 53.

Women can presently qualify for about three out of four jobs DoD-wide.[16] Present Service plans call for a gradual expansion of the role of women from less than 2 percent of the total force to approximately 4 percent by FY 1977.[17] At that time, total DoD female enlisted accessions will be about 36,000 per year, drawn from a pool of physically qualified, mental category III or above high school graduates estimated to be greater than 400,000 per year.[18]

Relaxation of any or all of these restrictions remains a possible course of action to significantly increase supply, but to date no action has been required or taken. Of course, each restriction may still be undesirable for reasons of cost or performance.

Influence 5

Although recruiting is only one component of the overall process of procuring, training, and using personnel, virtually all operational adaptations implemented to maintain or improve this process have been concentrated in the recruiting arena, and none in the areas of training and job staffing patterns.

As in the pre-Volunteer RCA process, the minimum aptitude requirements for entry into any occupational specialty remain influenced by the perceived needs of the training establishments to produce qualified graduates within limitations of time, budget, and customary training methods. These aptitude requirements partially determine the difficulty of the job facing recruiters. In addition to this influence, the training establishment further influences recruiting performance because the opportunity for vocational training has been and is a substantial

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[16] M. Binkin and J. D. Johnston, *All-Volunteer Armed Forces*, p. 47.

[17] Central All-Volunteer Force Task Force, *Utilization of Military Women (A Report of Increased Utilization of Military Women, FY 1973-1977)*, Office of the Assistant Secretary of Defense (M&RA), December 1972.

[18] Report to the Congress by the Comptroller General of the United States, *Problems in Meeting Military Manpower Needs in the All-Volunteer Force*, 1973, pp. 51, 54.

inducement to enlist.[19] Changes in the timing or degree of formal classroom training may now affect the attractiveness of a particular military specialty and thereby the supply of willing and qualified recruits.

Similarly, the expertise of recruiters, advertising specialists, and occupational counselors may affect the quality of trainees available to the training establishments, which, in turn, may affect the number of training graduates available to using commands. Completing the circle, the impressions of service life communicated by men working in these commands and returning to their hometowns may do much to influence other prospective recruits and therefore local recruiting performance.

As this example illustrates, the performance of the recruiting, training, or using organizations of each Service may now be much more dependent on the performance of the others; yet, virtually all operational adaptations to volunteerism have been concentrated in the recruiting arena alone.

Influence 6

There has been a definite trend toward the diffusion of traditional RCA responsibilities over a greater number of system participants, the most important of which is the prospective recruit himself.

The major changes to the assignment process are immediate outgrowths of the changes already described for recruiting and classification. First, fewer new recruits receive their occupational assignments at this point in the system, having already been assigned in accordance with the selection of an enlistment option.[20] Furthermore, many of those not given an occupational assignment as part of their enlistment contract have been given some other form of commitment, one which must be honored as a working constraint, such as, for example, promise of assignment to Europe.

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[19] See, for example, testimony of Hon. James E. Johnson, *Hearings before the Special Subcommittee on Recruiting and Retention of Military Personnel.*

[20] See Table 6.

As indicated earlier, assignment decisions are beginning to place a greater emphasis on the recruit's occupational preferences, a deviation from the stricter aptitude-matching philosophy of earlier years. Thus the assignment process, while still important, has diffused much of its traditional authority over recruiters and prospective recruits. And much of this transferred authority has been decentralized to local operations, exemplified by the Army's individual unit and base recruiting activities.

Influence 7

The present RCA system is much more complex from the standpoint of operational evaluation and control than its predecessor.

The theoretical and empirical foundations for manpower policy evaluation are being severely tested by the AVF transition. This is a result of both the narrow applicability of much manpower research and the complex and rapidly changing system with which policymakers are faced.

For example, we cannot estimate with confidence how important the following are to job performance: aptitudes, experience, training, motivation, communication skills, or leadership ability. Furthermore, we are limited in our capacity to estimate the responsiveness of the supply of new recruits to variations in length of first-term commitment, opportunities for training, pay and benefits, or the opportunity for travel. In short, we are often unable to estimate with confidence the effect that a policy change will have on supply; even if we could, we would still generally be unable to estimate the net worth of what we received for those changes. The process represented by Fig. 7 presents little opportunity for rational analysis, and we must often rely on intuition to evaluate the relative effectiveness of important manpower policies. Apparently, solutions to the increasingly complex problems and issues in this area must be based on judgments and educated guesses, just as many of the policy changes initiated in transition were based largely on judgment and intuition, not analysis. As comparison of Figs. 6 and 7 suggests, the transition to a volunteer environment has raised problems in evaluation and control that the pre-Volunteer system never faced, at least not in the same degree. Furthermore, because of the urgency attached

to the elimination of the draft, there has been little time to examine long-term implications or "fine-tuning" operational practices. When and if the AVF is accepted as a stable enterprise, then much more attention may be demanded in this area.

SUMMARY

In Sec. I we described pre-Volunteer RCA in terms of its functional elements and the processes involved. In this section we discussed seven major underlying influences that constitute the All-Volunteer RCA "system":

1. The manpower supply situation appears generally adequate but will be more speculative than in pre-Volunteer years.
2. Competition has become much more important as a means of distributing recruits among the Services and, within each, among jobs, units, or bases.
3. The principal qualitative procurement objective of the Services is to maintain or improve pre-Volunteer standards.
4. Traditional and largely self-imposed limitations on the supply of potential recruits are being maintained, as for example with the continued limited participation of women in the Armed Services.
5. Virtually all operational adaptations to volunteerism have been concentrated in the recruiting arena.
6. There has been a definite trend toward the diffusion of traditional RCA responsibilities over a greater number of system participants, the most important of which is the prospective recruit himself.
7. The present RCA system is much more complex from the standpoint of operational evaluation and control than its predecessor.

Of course, none of these seven influences derives from a recognizable explicit policy statement; rather, each derives from a multitude of long-standing policies, traditional practices, and standard operating procedures. We have adopted this approach to facilitate discussion of the emerging issues and management implications in Sec. III.

III. CHALLENGES TO MANAGEMENT IN THE ALL-VOLUNTEER FORCE

We have identified the principal characteristics of the RCA process, using as a framework the set of seven major underlying influences that account for the important forces acting to shape that process. We chose this influence-set framework to facilitate our present discussion of six emerging issues, each of which will require emphasis in the near future. We consider these issues challenges to management in the AVF because they represent areas in which the Services and OSD can realize important payoffs in terms of minimization or avoidance of potential problems.

The six issues, not necessarily unfamiliar to those who have worked toward achievement of the AVF over the past several years, have arisen or been exacerbated by the AVF transition, and represent potentially serious pitfalls if left unattended. In this section we relate each issue to one or more of the underlying influences developed in Sec. II. We summarize by formulating a matrix of issues and influences to depict the interdependences.

Our discussion must be largely subjective because we are dealing with conjecture about the future, not with established facts. However, we consider this treatment in keeping with our objective of focusing management attention on the issues and providing a foundation for subsequent management action. To the extent that we arouse some measure of reasonable controversy or elicit general agreement, we will have accomplished our objective.

THE ISSUES

Briefly stated, the issues to be examined are as follows:

A. The supply of volunteers is subject to large variations over time. Some of these variations are cyclical, or seasonal, and therefore relatively predictable; others are almost totally unpredictable.

B. The supply of volunteers will tend to distribute itself inefficiently among the Services.

C. The supply of volunteers will tend to distribute itself inefficiently within each Service.

D. The Reserve Forces are faced with the prospect of continuing deterioration of their supply of volunteers in the absence of specific mechanisms for Total Force analysis.

E. Efficient planning, organizing, and controlling of the RCA system are impeded by the absence of mechanisms for the evaluation of RCA effectiveness.

F. Insufficient attention is being devoted to reexamination of reenlistment behavior and retention programs in light of the probable differences in volunteer outlooks.

Issue A

The supply of volunteers is subject to large variations over time. Some of these variations are cyclical, or seasonal, and therefore relatively predictable; others are almost totally unpredictable.

The supply of volunteers has historically been highly seasonal. June and January have consistently been the best months; May and December have been the worst. To a great extent this seasonal variation has been smoothed by conscription and its resultant pressures on the draft-eligibles. In the presence of the draft the Services have not been forced to come to grips with the full effect of seasonal variations in supply.

With the draft eliminated, the Services will have to confront these periodic fluctuations in supply. What makes such fluctuations important is primarily the cost of operating a steady-state training establishment under conditions of extreme variation in student supply. In the absence of some compensating smoothing of supply, the Services are faced with under-utilization of the training base when supply is low. To cope with peak supplies, they may have to maintain an even larger training base, thereby exacerbating the under-utilization during months of low supply. The efficient operation of conventional classroom training facilities is not going to be made any easier by

subjecting these facilities to substantial variations in student supply. In view of the large costs of training and the mood of Congress toward those costs, this may soon become a major problem. If the cost of formal training is aggravated by cyclical supply problems, then a restructuring of the training base deserves consideration as a means of reducing that cost. Heretofore, the Services have overcome the problem by adjusting the supply to conform to the "needs" of the training base, devoting almost no effort to alternative solutions involving ways to adjust the training base to adapt to the supply.

In addition to the cyclical variations, the RCA system must operate with a supply that could prove particularly sensitive to gradual changes in external factors such as local or national economic conditions. It may be essential to identify such factors so that long-term variations in the availability of volunteers may be forecast and planned for. Unlike draft calls, volunteer rates cannot be rapidly adjusted when they fall to unacceptable levels.

Underlying Influences. The influences underlying this issue are fairly obvious. Although there has been a major change in the nature of the supply of new recruits, there has been no attempt to effect corresponding adaptations in the training base being fed by that supply.[1] Such changes might include increased reliance on OJT as a training "style" more easily adaptable to fluctuations in supply; the use of civilian contract schools to assist with training during peak periods; or the development of methodologies to assist in adjusting classroom training facilities to a cyclical supply of students. Because we do not propose to outline solutions in this paper, we do not belabor this point. We only stipulate which of the seven major influences discussed in Sec. II underlie this issue of supply variations. To clarify the approach used in the remainder of this section, we restate this influence:

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[1]Although one might argue that the delayed enlistment option acts in some way to provide adaptation to the "demands" of the training base, it only does so indirectly, and is not considered an attempt by the Services to smooth inputs as much as to "bank" prospective recruits.

Influence 5: Although recruiting is only one component of the overall process of procuring, training, and using personnel, virtually all operational adaptations implemented to maintain or improve this process have been concentrated in the recruiting arena, and none in the areas of training and job staffing patterns.

Traditional restrictions on the supply of potential recruits act to influence the magnitude of supply problems because both act to limit the supply of eligibles. For example, limitations on the numbers of women accepted by the Services are largely self-imposed and presumably based on an opinion that "women cost more than men" because of their low retention rates. Even if true, that appraisal is hardly applicable to an AVF structured to provide adequate career progression for women as opposed to the somewhat unappealing conditions that have existed and, for the most part, still exist. Brig. Gen. Jeanne M. Holm recently stated:

> The point being that military women, as a resource, has not really been taken very seriously since WWII, until just recently...Not only did the services not take the subject of women seriously, but women as a whole evidenced disinterest in the military and to some degree were downright antagonistic to the idea of serving in the armed forces. In the past 5 years the laws have been changed, women's attitudes have been changing, and coincidentally, the military manpower picture has been altered...Five years ago recruiters had to really work to recruit 100 college women for officer training and 2,000 high school graduates for the enlisted program. *Since then, although we have tripled recruitment, women are still waiting in line to join.*[2] [Emphasis added.]

Another underlying influence affecting this issue is the adherence to existing quality standards. The traditional argument for adherence to minimum aptitude requirements for entry into training is that higher

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[2] "The Future of Military 'Womanpower'," address by Gen. Jeanne M. Holm, Director, Secretary of the Air Force Personnel Council, to the National Secretaries Association, Colorado Springs, Colorado, February 10, 1973. At the time of this presentation, General Holm was Director of the WAF.

aptitude individuals possess higher probabilities of successfully completing training. Since training is costly, so the reasoning goes, the higher aptitude individual will, on average, cost less. This, of course, ignores such important questions as: How much less? What about his retention probability as compared to the lower aptitude individual? Because of many new factors to be considered in the AVF--not the least of which is the cyclical supply problem--it is quite possible that higher aptitude individuals are no longer less costly over all, if indeed they ever were. We think that the notion that the downward adjustment of quality standards may reduce overall training costs is a compelling one worthy of careful analysis and experimentation.

Some recent remarks of outgoing Assistant Secretary of Defense for Manpower and Reserve Affairs Roger T. Kelley[3] are directly related to the issues under discussion in this report, particularly to the issue of Service-imposed restrictions on the supply of volunteers:[4]

1. The Services are setting health or intelligence standards unrealistically high, and setting recruiting "goals" that never before have been reached.
2. The Services supplied Congress with one set of volunteer force enlistment standards in hearings last year, then gave the GAO a different higher set of standards a short time later, making the problems of an all-volunteer force look tougher.
3. Recruiting goals must not be confused with requirements. Recalling recent reports of the Services failing to meet recruiting targets, Kelley contended that if they had met their "goals" they would have created overstrengths.
4. The Services are getting a higher proportion of high school graduates and high IQ men than they really need for the limited number of sophisticated jobs.

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[3]"Kelley Says Saboteurs Hit All-Vol," *Air Force Times*, Vol. 33, No. 46, June 20, 1973, p. 3.

[4]It should be noted, however, that the validity of these remarks has not been verified by the author nor is a response from the Services indicating their position available at this time.

5. The Services need a more realistic balance between quality and quantity, and a more accurate match between the people and the "learning difficulty of the jobs to be performed."
6. The Services are recruiting about 34 percent of their people in the mental category I and II brackets, but they would have enough of these high-quality recruits to fill their difficult jobs even if the ratio dropped to 30 percent or less.
7. There has been pressure on the Services to maintain low entrance standards for the sake of equity as long as men were being drafted. Service authorities have long expected that higher pay and other benefits would permit them to be more choosy in recruiting.

Issue B

The supply of volunteers will tend to distribute itself inefficiently among the Services.

The Services must concern themselves with achieving a mutually acceptable distribution of volunteers--particularly high-quality volunteers--without indulging in competitive maneuvers that increase the overall DoD cost of recruiting. During the transition to volunteerism each Service has developed its own approach to the problem of maintaining an adequate flow of volunteers of acceptable quality. Aided by the infusion of large sums of "volunteer" money, and by the unifying influence of OSD's Central All-Volunteer Task Force, the Services have generally proceeded in harmony with one another despite their obviously competitive posture. Each Service is eager to work out its problems with a minimum of "interference" and a minimum of consideration for the problems of any other Service.

In the face of any significant reduction in the supply of recruits, and lacking any explicit scheme for the distribution of available volunteers among the Services, we may see one Service experiencing serious qualitative shortfalls at the same time that another has more than enough high-quality recruits to satisfy its minimum requirements.[5]

[5] As the data of Figs. 8 and 9 indicate, to some extent this has already happened. Furthermore, one recent projection found the Army and

Similarly, we may find enlistment incentive packages being designed in terms of what the least competitive Service needs to capture an acceptable market share. If, for instance, the Army experienced serious qualitative recruiting shortfalls at the same time the Air Force had more than satisfied its minimum qualitative requirements,[6] it would be naive to expect the Air Force to attempt to alleviate the Army's problem.[7] Moreover, if the Army wanted to appeal to OSD and the Congress for an aptitude-related enlistment bonus, the Air Force would be unlikely to object as long as Air Force recruits were offered the same bonus.

Underlying Influences. The influences underlying this issue unmistakably derive from de facto Service policies limiting the supply of eligible recruits (e.g., quality standards and limited recruiting of women). Most important is the *concept* of mental quality itself. Certainly there are significant differences between individuals and their performances on various tasks or jobs. But differences in job performance among individuals in the Armed Services have never been well documented, analyzed, or understood. Since job performance differences have not been well established, the relationship between prevailing notions of mental quality and job performance is poorly understood. If performance differences could be clarified, then a reexamination of the *concept* of mental quality (as opposed to a particular *standard*, given the concept) might yield a less restrictive notion. For example, the present concept of quality totally avoids explicit consideration of motivation and, therefore, treats both draftees and true volunteers as equally valuable resources. Were this concept amended to consider an individual's aptitudes and motivation as partially substitutable for one another, then the overall quality of an AVF might appear much

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Marine Corps experiencing major shortfalls while the Air Force met or exceeded its requirements. See Comptroller General, *Problems in Meeting Military Manpower Needs*.

[6]These minimum requirements, we should add, are largely self-determined. See Table 4.

[7]To quote the Central All-Volunteer Force Task Force in *Broadening the Recruiting Market*: "Competition among the Services for scarce manpower and specific skills still exists regardless of the criticality of each Service's needs."

better than its draft-influenced predecessor.[8] And this would clearly influence the magnitude of any so-called qualitative recruiting shortfalls.

Issue C

The supply of volunteers will tend to distribute itself inefficiently within each Service.

In July 1972, although the enlisted manning of each Service was at or near the desired level, the manning of particular skills showed some serious maldistributions. Fully 53 percent of all Army skills were either manned below 80 percent or above 120 percent. For the Navy, Marine Corps, and Air Force the imbalances were 14, 55, and 25 percent, respectively.[9]

Unless increased attention is paid to the effects of current recruiting and assignment practices, serious imbalances in the distribution of personnel within each of the Services may occur. That is, each service may find that its supply of volunteers, while seemingly adequate to meet the overall qualitative requirements of the force, fails to provide enough high-quality recruits for certain occupational specialties or at certain geographic locations. This internal qualitative maldistribution may occur for the following reasons:

1. Current recruiting and classification practices emphasize the preferences of a prospective recruit to a much greater degree than pre-Volunteer practices. Consequently, high-quality recruits are generally able to select occupational specialties for themselves, whether or not the specialty they select represents the requirements or priorities of the Service. Even if the Services succeed in attracting as many high-quality individuals as they had during the draft, we cannot expect these individuals to distribute themselves over occupational specialties in

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[8]Officials of the British Ministry of Defense advised a visiting American Task Force that as a result of ending conscription in Britain, the more highly motivated volunteer force had greatly improved its human utilization. (The RAF estimated it would take three conscripts to do what two volunteers were doing.)

[9]*Problems in Meeting Military Manpower Needs*, p. 31.

the same manner that the Services would have distributed them. This being the case, the Services may experience localized qualitative shortfalls even though overall they are successfully attracting high-quality individuals.

Exactly this problem has recently been suggested by the GAO as a major cause of undermanning in Service training schools:

> When recruiting objectives are achieved, as was the case during the first 6 months of fiscal year 1973, it seems logical that sufficient recruits would be available for assignment to training schools. However, a significant number of school seats remained vacant in the Navy and the Marine Corps and had to be filled by draftees in the Army. These vacancies can be attributed to a supply shortage--either because of the preference of qualified recruits for other types of assignments or because enough men of the proper mental ability or aptitude could not be recruited.[10]

Whether problems of this sort prove to be transient or grow to major proportions remains to be determined, but this much is clear: the potential for selective shortfalls is much higher because of recent adaptations to volunteerism.

2. The Services may experience quantitative shortfalls in certain occupational specialties, such as cook, if demand for those occupations is very low because of their inherent unattractiveness. Usually such occupations have been staffed either with draftees or with recruits who entered service without a particular occupational commitment.[11] If these unobligated enlistment options develop a reputation for always landing a recruit in an unattractive job, then these options and the jobs that have disproportionately relied on them may experience shortfalls. And since unobligated enlistment options represent a source of assignment flexibility which the Services still possess, these options must not earn the reputation of being "losers" if this flexibility is to be retained.

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[10] Ibid., p. 28.

[11] For example, the Regular Army enlistment option.

3. Similarly, the Services may find that they have more than enough recruits willing to enlist for certain bases and geographic locations, but too few willing to enlist for less glamorous assignments. Under these conditions, the unobligated enlistment option would again be an essential tool in assigning individuals to unpopular locations. As emphasized above, if such a policy becomes too prevalent, the unobligated options may rapidly earn a reputation which makes them very unattractive to prospective recruits.

Table 7 illustrates the nature and potential magnitude of geographic maldistribution of quality recruits. For each of the nine Census Divisions there appears a ratio of the total numbers of mental category IV accessions to the total number of mental category I accessions for all Services in 1970 and 1971. We can view these rations as a sort of multiplier that exists between the highest and lowest quality accessions from each of these geographical regions. In Census Division I in 1970, for example, there were 3.45 mental category IV accessions for every mental category I accession. We expect that the differences in regional quality suggested by these ratios will obtain for some time to come. Indeed, studies have been indicating similar regional variations in quality for many years.[12]

The regional differences are considerable. Consider Census Divisions IV and VI, since they represent the extremes. The West North Central area supplied one mental category I recruit for every two mental category IV recruits. The East South Central area, however, supplied only one mental category I recruit for every 18 mental category IV recruits. Hence, to the extent that any one Service concentrates its recruiting in particular areas to the exclusion of other areas, or decentralized regional recruiting (e.g., Army's base/unit of choice) is conducted, there may be marked propensity for large quality differences to appear within and among Services.

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[12] See, in particular, B. D. Karpinos, *The Mental Test Qualifications of American Youths for Military Service and Its Relationship to Educational Attainment*, Proceedings of the Social Statistics Section, American Statistical Association, Washington, D.C., 1966.

Table 7

RATIO OF MENTAL CATEGORIES IV TO I FOR 1970 AND 1971 MALE ENLISTED ACCESSIONS IN THE DoD (AGES 17-22) FOR EACH CENSUS DIVISION[a]

Census Division	Location	% of Qualified Population	CAT IV/CAT I Ratio	
			1970 Accessions	1971 Accessions
I	New England	5.4	3.45	3.74
II	Middle Atlantic	14.6	5.24	5.83
III	East North Central	21.1	4.69	5.03
IV	West North Central	9.0	2.01	1.98
V	South Atlantic	15.4	11.62	12.19
VI	East South Central	6.5	16.71	18.39
VII	West South Central	10.5	9.85	8.84
VIII	Mountain	4.9	2.78	2.32
IX	Pacific	12.6	3.19	3.03
		100.0		

[a]Ratios and percentages were calculated directly from tabular data appearing on pages 10 and 38 of Volume II of the SABER VOLUNTEER-BRAVO study published by USAF Assistant Chief of Staff for Studies and Analysis, 1 July 1972: *Male Enlisted Accessions: An Overview of the Nine Census Divisions CY 1970 CY 1971 (17-22 Year Olds).*

Underlying Influences. The potential maldistribution problems sketched above are going to be shaped by several underlying influences, the most important of which are the de facto restrictions on the participation of women and the imposition of pre-Volunteer mental, physical, and moral standards. These limitations to the supply of qualified recruits contribute to a potential scarcity of willing and qualified individuals.

Another influence may be the trend toward decentralization of recruiting responsibilities. Recruiting activities undertaken by local base or unit commanders appear to have been successful thus far, but little is known about the long-term effects of these successes on

unpopular bases or on those units still dependent on centralized national recruiting. If individuals who might otherwise have been willing to be assigned to unpopular bases or units are being drawn off by the local recruiting activities of more glamorous outfits, then eventually the decentralized activities may aggravate recruiting problems for the less glamorous. A related influence may be the geographic variability of supply whereby an otherwise popular unit assigned to a base in an area with little surrounding population may have significantly more difficult recruiting problems than if assigned near larger or more responsive population centers.

The magnitude of any internal maldistribution problem will be strongly influenced by the Services' reliance on competition between bases, units, or individual occupational specialties for the "favors" of prospective recruits. As recruit preferences become more important determinants of occupational assignments, the potential for inefficient distribution of manpower resources within a Service will clearly increase.

Finally, if traditional notions of quality obtain, and historical levels of quality are taken as objectives, it is entirely possible for serious manning problems to arise even if overall or force-wide objectives are met. To maintain historical levels of quality in individual occupations, units, or bases, it will be necessary for the overall force to attract *more high-quality individuals than before.*

Issue D

The Reserve Forces are faced with the prospect of continuing deterioration of their supply of volunteers in the absence of specific mechanisms for Total Force analysis.

The Reserves have depended on the effects of the draft to meet their manpower needs to an even greater extent than the Actives. Removal of the draft is severely straining the recruiting capacity of the Reserves. Despite pronouncements from the Services and OSD regarding the importance of the Reserves in the Total Force context, little substantive work has been done to improve their recruiting prospects except by the Reserve Components themselves. The level of effectiveness

of Reserve recruiting is far from that achieved by the Actives during the AVF transition. Paradoxically, as budget pressures mount, the wisdom of conducting Total Force tradeoffs becomes obvious, yet in the face of severe Reserve manpower shortages, it is clear that little relief will be forthcoming because of the absence of some explicit mechanisms for such tradeoffs.

To be sure, the Reserves have been recent beneficiaries of large amounts of newer equipment from the Actives; however, such infusions of machinery are much less a result of any rational analysis than simply the usual molting of the Actives following any war. Given the deteriorating Reserve manpower supply and adherence to the traditional concepts of employment of the Reserves, we expect there will be an unending series of backing and filling operations to enable the Reserves to be able to satisfy the "requirements" which emanate from (1) how the Services calculate the wartime output to be gained from the equipment in the hands of the Reserves and (2) the Organization Tables developed by the Services for the Active units and applied directly to the Reserves to structure the Reserve units--as a result of policy, not analysis--to mirror Active units.

A key consideration of the Total Force Concept is the economic savings made possible through a balancing of resource inputs to all forces in the interests of obtaining maximum output, or combat capability. The lower peacetime sustaining costs of Reserve units can presumably allow a larger total force for a given budget. Unless there is first a significant policy shift which will provide the Reserves with some opportunity to avoid catastrophic personnel shortages, such tradeoffs are of academic interest only. Even more appropriate than the issue of personnel shortages, in our opinion, is the question: What is the conceptual basis for the existence of the Reserves, and how should they be organized in this AVF environment? Clearly this warrants as much attention as the mundane issue of personnel shortages within the traditional Reserve structure, but it was considered to be beyond the scope of this report. Although we have freely questioned traditional policies, we do so with an implied acceptance of existing operational requirements and general Force structures.

Existing compensation schedules will not attract anywhere near the numbers of non-prior service recruits "needed," and the prior service inputs are unlikely to make up the difference. Despite strenuous efforts at recruitment, it appears all but certain that the Reserves will continue to experience significant shortfalls.

Underlying Influences. The underlying influences are very similar to those discussed with regard to potential personnel maldistribution problems. The maintenance of traditional notions of quality and restrictions on the participation of women serve to limit the potential supply of recruits to both the Active and Reserve Forces. Similarly, Active/Reserve competition for available recruits may create an eventually counterproductive recruiting posture.

The absence of any significant reexamination of the role of the Reserves, despite major changes in the supply environment, suggests that any future efforts to train and staff the Reserves along traditional lines may be ill advised. Since it is doubtful the Reserves can fill their traditional role, it may be appropriate to examine the training and staffing patterns associated with that role. Finally, one of the most vexing influences is the absence of sufficient sound analysis to answer such important questions as How can we estimate the effectiveness of the Reserves in any of several alternative recruiting postures? and How can we estimate the effect of policies of the Actives or the Reserves on the recruiting performance of each other? Without reasonable estimates of these relationships, we doubt that the Active Forces will devote much attention to the analysis of how their activities affect the Reserves.

Issue E

Efficient planning, organizing, and controlling of the RCA system are impeded by the absence of mechanisms for the evaluation of RCA effectiveness.

The Services have devoted relatively little attention to the development of criteria and evaluation techniques to establish RCA effectiveness. In the pre-Volunteer period this was to be expected in view of the guaranteed sufficiency of supply. In effect, the RCA mission

amounted to seeing that the mandated numbers of men got through the door and subsequently filled jobs for which each possessed the minimum aptitude. Performance evaluation for this RCA system required little more than estimation of the costs and effectiveness of the system in attracting new recruits. The participants worked primarily to overcome the minor effects of supply variations in the knowledge that only short-term shortfalls could occur: the draft or its indirect pressure would eventually fill all requirements of each Service.

Now the AVF is an accomplished fact, and the supply of volunteers, although presently adequate, is undeniably speculative. Furthermore, the cost of these volunteers is considerably larger, resulting in part from the necessity to compete for personnel. Clearly the RCA process has changed in operation and significantly increased in importance, yet it continues to function in accordance with pre-Volunteer standards of effectiveness. Simply stated, if we view the RCA mission as one of attracting recruits and achieving a mutually beneficial matching of each recruit to a particular job, then it follows that we should measure the performance of the RCA system--as well as the performance of each of the various RCA components--by criteria that accurately reflect the changing environment of that system. For example, it is no longer appropriate to measure recruiting performance using a yardstick of recruiting quota fills. In view of the expanded roles of recruiters, recruiting organizations should be held responsible, at least in part, for the overall effectiveness of the manpower that they have selected for entry into the Services.

In short, each component of the RCA system must be explicitly evaluated in terms of the real output of its efforts. Failure to do this will not only be a breech of management principles, but will likely result in the emergence of suboptimal, possibly counterproductive, performance criteria.

In developing new criteria for the evaluation of performance, the two functions of the RCA System must be considered: attracting new recruits and assigning them to particular jobs. Both should be considered in establishing criteria of performance. And if we attach still other objectives to RCA activities--objectives such as the

prediction of potential disciplinary problems or detection of drug abusers--the problems of evaluating the system become progressively harder. Development of RCA *system* performance criteria is the sine qua non of effective RCA performance in the AVF, and these system criteria are obviously prerequisite to the development of proper mechanisms for evaluation of the various RCA components.

Underlying Influences. The single greatest influence underlying this issue is the weak analytic foundation which manpower research has provided.[13] In this context we especially need to improve our understanding of the "science" of job matching and the job performance payoffs implied by differences in aptitudes, motivation, and background. Research is capable of providing at least limited answers to some of these problems if time and effort can be devoted to a systematic attempt to unravel them. If not, then it is likely that we will be faced with a succession of difficult manpower problems for which little more than intuitive solutions can be provided.

Another influence is the general trend toward decentralization of RCA responsibilities. Decentralization has increased the importance of recruiters while complicating the interrelationships between training and recruiting. For example, any significant change in the timing or methods of training should now be evaluated, considering not just its influence on training itself, but also its influence on attracting prospective recruits. In general, decentralization has made overall system performance much more dependent on the complex interrelationships between RCA components.

Finally, the potential variability of the future manpower supply has made the establishment of overall system performance criteria much more difficult than in the "assured supply" environment of past years.

Issue F

Insufficient attention is being devoted to reexamination of reenlistment behavior and retention programs in light of the probable differences in volunteer outlook.

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[13] For an extensive discussion of this problem see Task Force on Manpower Research, Defense Science Board, ODDR&E, *Manpower Research and Management in Large Organizations*, June 1971.

The initiatives taken to realize the AVF have focused on the task of maintaining an adequate supply of NPS enlistees.

Insufficient attention has been given to the problem of career retention beyond the first term. With the elimination of both the draftee and the draft-induced volunteer from the first-term force, we should expect retention behavior as well as first-term performance to improve. If so, the existing reenlistment incentive structure may be excessively costly and perhaps even counterproductive, since, in view of the more positive motivation of volunteers toward service life, retention is more a recruiting than a reenlistment problem. Even more important, the maintenance of a traditionally organized career force warrants thorough reexamination.

A case in point is the Variable Reenlistment Bonus (VRB) (see Table 8). For FY 1968-1970, there were 122,816 recipients of VRB payments totaling $552.8 million, based on an average payment of $4,900. It is estimated that these payments provided 36,859 reenlistments that would not otherwise have occurred. This means that DoD paid about

Table 8
VARIABLE REENLISTMENT BONUS OUTLAYS FOR
ALL SERVICES, FYs 1968-1970

Service	Total Receiving VRB			Estimated Extra Reenlistees Resulting from VRB		
	FY 68	FY 69	Fy 70	Fy 68	Fy 69	Fy 70
Army	13,852	13,153	19,229	3,676	3,949	6,069
Navy	8,488	9,197	9,364	2,851	3,091	3,326
Marines	2,914	2,176	2,346	771	621	657
Air Force	8,483	12,282	11,332	3,122	4,405	4,319
DoD	33,737	36,808	42,271	10,422	12,066	14,371

SOURCE: U.S., Congress, House, *Hearings before the Special Subcommittee on Recruiting and Retention of Military Personnel of the Committee on Armed Services, House of Representatives*, 92d Cong. (H.A.S.C. No. 92-42), pp. 8105, 8106.

$15,000 each for these incremental enlistments, a considerable cost worth reexamining in a volunteer environment.

Such a reexamination, however, must also consider that the VRB has been a widely publicized program whose very existence may have some far-reaching effect on the supply of prospective recruits, as well as on their occupational preferences and assignments. This is an admittedly complex issue, but one which may well be raised by the Congress whether or not the Services care to examine it.

If the evaluation of the need for, and effectiveness of, reenlistment incentives does become a major problem for the Services, then as with the evaluation of RCA performance, the magnitude of the problem will depend strongly on how much homework the Services have done to develop an understanding of this area. Thus far, the prevailing imperative has been to provide enough recruits; not to worry about their subsequent reenlistment behavior.

This is not to say that there has been a total absence of activity in this regard, but that the OSD and Service efforts have, up to now, failed to yield significant results.[14]

Underlying Influences. The Services have made few major adjustments in the staffing patterns of career versus first-term forces, choosing rather to view retention objectives in the context of the need to flesh out traditional organizational hierarchies. Either these staffing patterns, the bonus structure itself, or the level and objectives of recruiting activities can be reexamined as ways of reducing the overall costs of maintaining the career Force.

SUMMARY

These six issues--the "challenges to management"-- represent important areas for management attention with regard to the RCA process in the AVF. Each issue has been related to its underlying influences,

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[14] In FY 1972 OSD proposed to Congress that the regular reenlistment bonus be eliminated and that the effective features of the Variable Reenlistment Bonus be applied to structuring a new bonus proposal called the Selective Reenlistment Bonus, which would, among other things, eliminate the requirement to pay a bonus to all reenlistees. The Senate failed to act, although H.R. 16924 was passed by the House.

thus providing a multidimensional view of the RCA system. This view is depicted in the matrix of influences and issues of Fig. 10.

To the extent that we have correctly characterized the RCA system in terms of its major underlying influences, and then accurately related the appropriate influences to each issue, we suggest that this matrix may bring some order to the complex interrelationships of the RCA system.

For example, the matrix records our earlier observation that one of the major influences acting on the issue of variations in supply over time (Issue A) is the Services' tendency to carry over traditional training and job staffing patterns from the pre-Volunteer to the All-Volunteer Force (Influence 5). Conceivably, one Service may see fit to attack the problem of seasonal supply variations by adjusting its training base[15] to adapt to those variations--a departure from the traditional emphasis on adjusting the supply to suit the training base. By thus manipulating the training pattern to affect the problem of seasonal supply variations, however, the Service will concurrently exert influence on other seemingly unrelated problems such as the reserve force issue (D) and the reenlistment incentive issue (F), as shown in Fig. 10.

In view of the relative autonomy of each Service, the delicate task of providing OSD management guidance must necessarily consist primarily of controlling and balancing the actions of the individual Services to achieve the best RCA performance at the least cost. Inasmuch as the attack on each issue must be undertaken with some knowledge of its relationship to the other issues, we offer the matrix of Fig. 10 as a starting point for the simultaneous consideration of all issues.

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[15] A variable training base could be developed by reverting to contractor operations with appropriate provisions for seasonal fluctuations in the size of the training Force. We do not pretend to have found this illustrative alternative to be cost effective.

ISSUE	INFLUENCE						
	1	2	3	4	5	6	7
A	●		●	●	●		●
B		●	●	●			
C	●	●	●	●		●	
D		●	●	●	●		●
E	●					●	●
F					●		●

ISSUES

A. The supply of volunteers is subject to large variations over time.

B. The supply of volunteers will tend to distribute itself inefficiently among the Services.

C. The supply of volunteers will tend to distribute itself inefficiently within each Service.

D. The Reserve Forces are faced with the prospect of deterioration of their supply of volunteers.

E. Efficient planning, organizing, and controlling of the RCA system are impeded by the absence of mechanisms for evaluation of RCA effectiveness.

F. Insufficient attention is being devoted to reexamination of re-enlistment behavior and retention programs.

INFLUENCES

1. The manpower supply situation appears generally adequate, but will be more speculative than in pre-Volunteer years.

2. Competition has become more important as a means of distributing recruits.

3. The principal qualitative procurement objective of the Services is to maintain or improve upon pre-Volunteer standards.

4. Traditional self-imposed limitations on the supply of potential recruits are being maintained.

5. Virtually all operational adaptations to volunteerism have been concentrated in the recruiting arena.

6. There has been a definite trend towards diffusion of traditional RCA responsibilities over a greater number of system participants.

7. The present RCA system is more complex from the standpoint of operational evaluation and control than its predecessors.

Fig. 10--RCA system issues and underlying influences

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